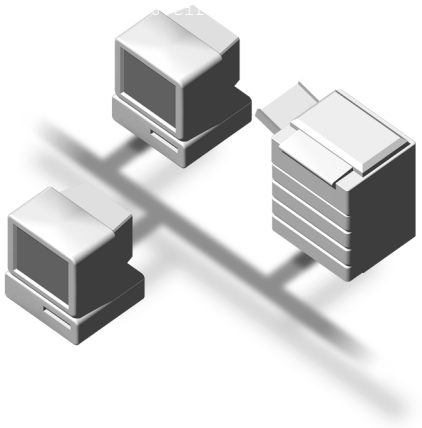
Network Printing Guide

Operating Instructions



Read this manual carefully before you use this product and keep it handy for future reference.
For safety, please follow the instructions in this manual.

Introduction

To get maximum versatility from this machine all operators should carefully read and follow the instructions in this manual. Please keep this manual in a handy place near the machine.

Please read the Safety Information in the Copy Reference before using this machine. It contains important information related to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS.

Important

Parts of this manual are subject to change without prior notice. In no event will the company be liable for direct, indirect, special, incidental, or consequential damages as a result of handling or operating the machine.

Software Version Conventions Used in this Manual

- NetWare 3.x means NetWare 3.12 and 3.2.
- NetWare 4.x means NetWare 4.1, 4.11 and IntranetWare.

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Note

The proper names of the Windows operating systems are as follows:

- Microsoft® Windows® 95 operating system
- Microsoft® Windows® 98 operating system
- Microsoft® Windows® Millennium Edition
- Microsoft® Windows® 2000 Professional
- Microsoft® Windows® 2000 Server
- Microsoft® Windows NT® Server operating system Version 4.0
- Microsoft® Windows NT® Workstation operating system Version 4.0

Manuals for This Machine

The following manuals describe the operational procedures and maintenance of this machine.

To enhance safe and efficient operation of this machine, all users should read and follow the instructions carefully.

❖ **Copy Reference**
Describes the procedures and functions for using this machine as a copier.

❖ **System Settings**
Describes the system settings of this machine.

❖ **Printer Unit Type 1045 Printer Reference 1**
Describes the system settings, procedures and functions for using this machine as a printer.

❖ **Printer Unit Type 1045 Printer Reference 2**
Describes the procedures and provides necessary information about using this machine as a printer. This manual is included as a PDF file on the CD-ROM labeled "Operating Instructions for Printer".

❖ **Network Printing Guide Operating Instructions**
Describes the procedures and provides necessary information about setting up and using the printer under the network environment. We recommend this manual as your first choice to read, and it is included as a PDF file on the CD-ROM labeled "Operating Instructions for Printer" (this manual).

❖ **PostScript 3 Unit Type 1045 Operating Instructions Supplement**
Describes the menus and features you can set using the PostScript 3 printer driver. This manual is provided as a PDF file on the CD-ROM labeled "Operating Instructions for Printer".

❖ **UNIX Supplement**
Provides information about setting up and using the printer in a UNIX environment. This manual is included as a PDF file on the CD-ROM labeled "Operating Instructions for Printer".

How to Read This Manual

Symbols

In this manual, the following symbols are used:

⚠ ***WARNING:***
This symbol indicates a potentially hazardous situation which, if instructions are not followed, could result in death or serious injury.

⚠ ***CAUTION:***
This symbol indicates a potentially hazardous situation which, if instructions are not followed, may result in minor or moderate injury or damage to property.

* The statements above are notes for your safety.

Important
If this instruction is not followed, paper might be misfed, originals might be damaged, or data might be lost. Be sure to read this.

Preparation
This symbol indicates the prior knowledge or preparations required before operating.

Note
This symbol indicates precautions for operation, or actions to take after misoperation.

Limitation
This symbol indicates numerical limits, functions that cannot be used together, or conditions in which a particular function cannot be used.

Reference
This symbol indicates a reference.

[ ]
Keys that appear on the machine's panel display.

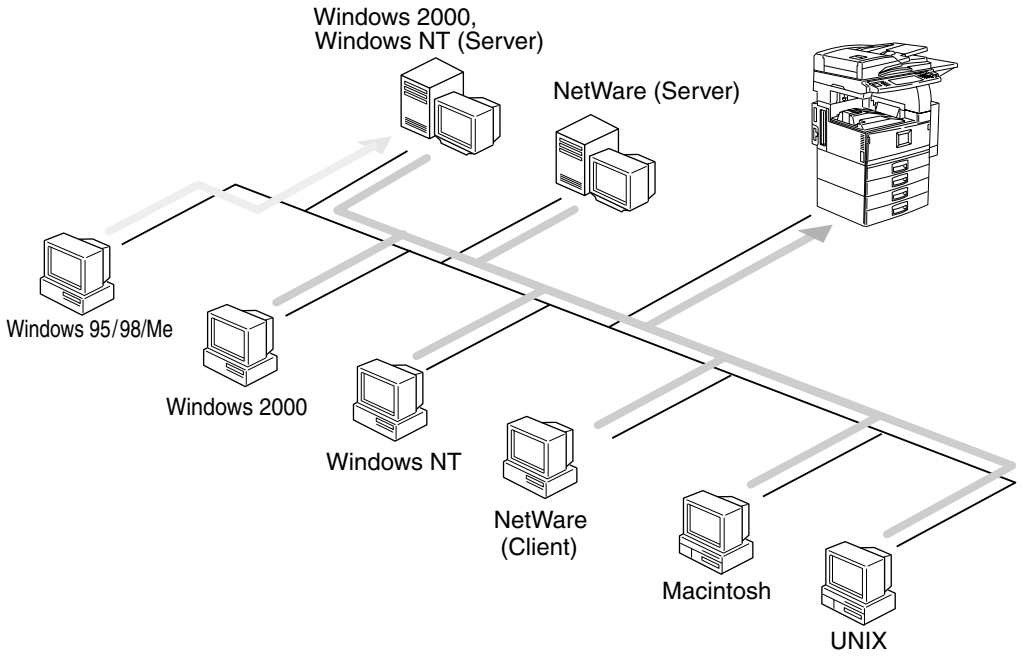
Keys and buttons that appear on the computer's display.

【 】
Keys built into the machine's control panel.

Keys on the computer's keyboard.

Introduction

This manual contains detailed instructions on configuring the machine as a network printer. Read the section appropriate to your network environment on how to configure the machine correctly.



Important

❒ The procedures written in this manual assume that you are a network administrator. If you are not, be sure to consult your network administrator before configuration.

Reference

For more information about installing the Network Interface Board and cabling, see the Printer Unit Type 1045 Printer Reference 1 that came with the printer option or printer/scanner option of this machine.

For more information about configuring the Network Interface Board with the control panel, see the System Settings that came with the printer option or printer/scanner option of this machine.

❖ Features

- Support for 100BASE-TX and 10BASE-T
- The Network Interface Board is compatible with NetWare (IPX/SPX, TCP/IP), Windows NT 4.0 (TCP/IP, NetBEUI, IPP [*1]), Windows 2000 (TCP/IP, NetBEUI, IPP [*1]), Windows 95/98/Me (TCP/IP, NetBEUI, IPP [*1]), UNIX (TCP/IP) and Macintosh (AppleTalk) protocols. This allows you to use the machine in a network that uses different protocols and operating systems.
- A computer used as a dedicated print server is not required because the Network Interface Board can be configured as a NetWare print server.
- The Network Interface Board can connect the machine to the network without requiring its own power supply because the Network Interface Board is installed inside the machine.

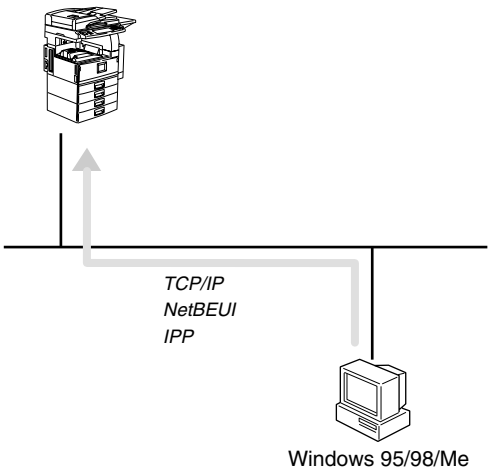
[*1] IPP (Internet Printing Protocol) is a protocol for printing via the Internet.

Setting Up the Machine on a Network

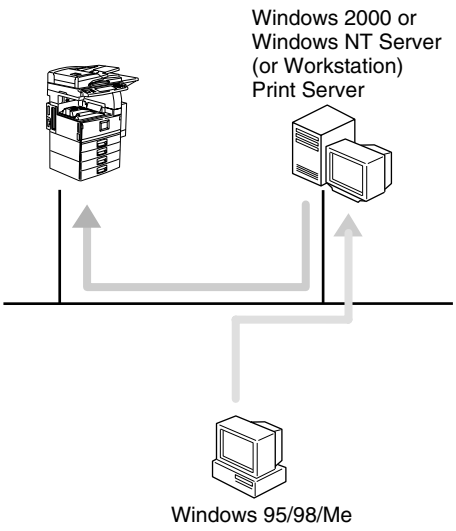
Windows 95/98/Me

For setting up the machine as a network printer in a Windows 95/98/Me environment, see P.1 *"Windows 95/98/Me Configuration"*. There are two methods for using the machine as a network printer.

❖Printing Without a Print Server



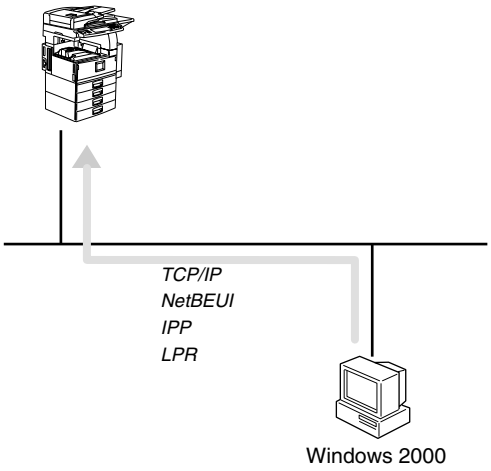
❖Printing With a Windows 2000 or Windows NT Print Server



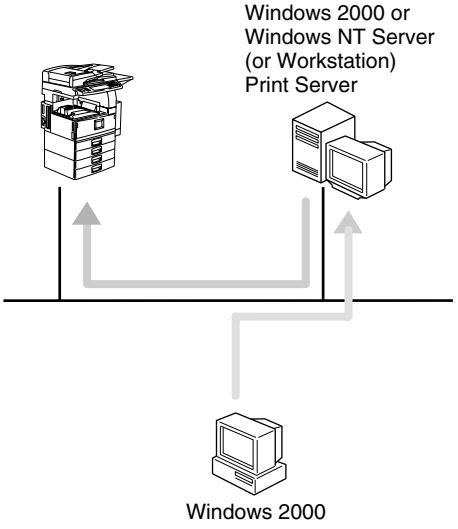
Windows 2000

For setting up the machine as a network printer in a Windows 2000 environment, see P.13 *"Windows 2000 Configuration"*. There are two methods for using the machine as a network printer.

❖**Printing Without a Print Server**



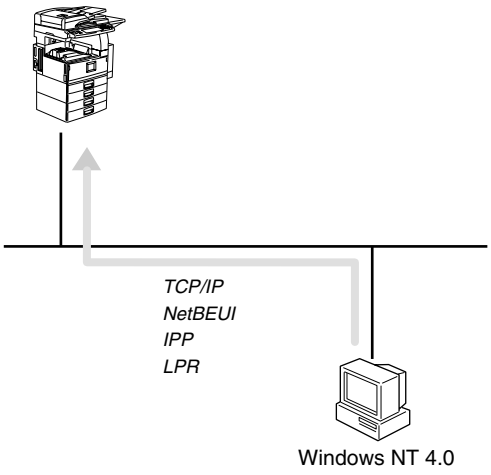
❖**Printing With a Windows 2000 or Windows NT Print Server**



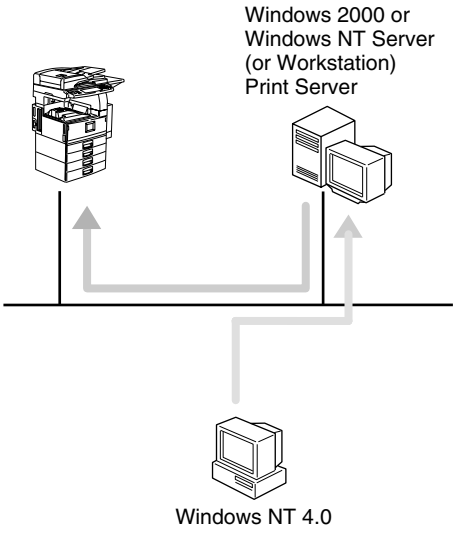
Windows NT 4.0

For setting up the machine as a network printer in a Windows NT 4.0 environment, see P.27 *"Windows NT 4.0 Configuration"*. There are two methods for using the machine as a network printer.

❖Printing Without a Print Server



❖Printing With a Windows 2000 or Windows NT Print Server



NetWare

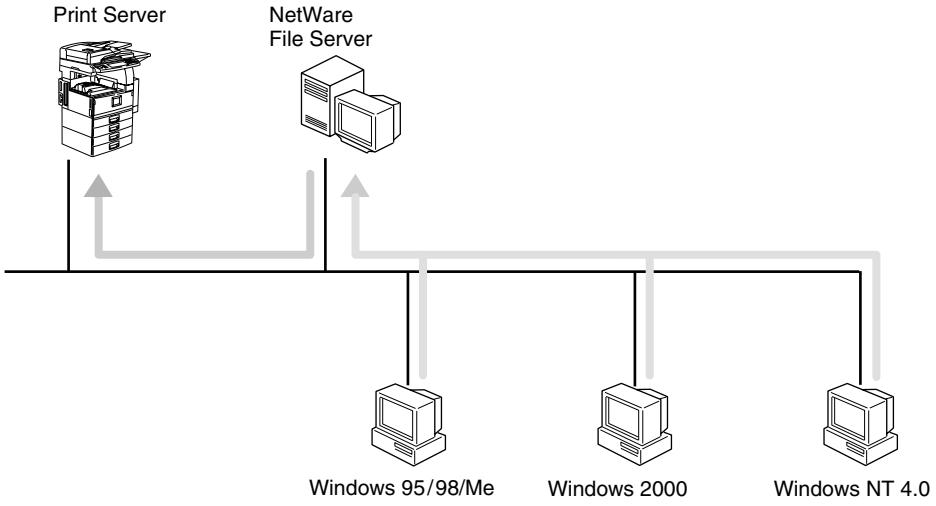
For setting up the machine as a network printer in a NetWare environment, see P.41 *"NetWare Configuration"*. The Network Interface Board allows you to use the machine as either a print server or a remote printer.

For more information about setting up the clients, see the following pages.

- Windows 95/98/Me ⇒ P.61 *"Windows 95/98/Me"*
- Windows 2000 ⇒ P.62 *"Windows 2000"*
- Windows NT 4.0 ⇒ P.63 *"Windows NT 4.0"*

Configuring the machine as a print server

A dedicated NetWare print server is not required because the machine can be configured as a print server.

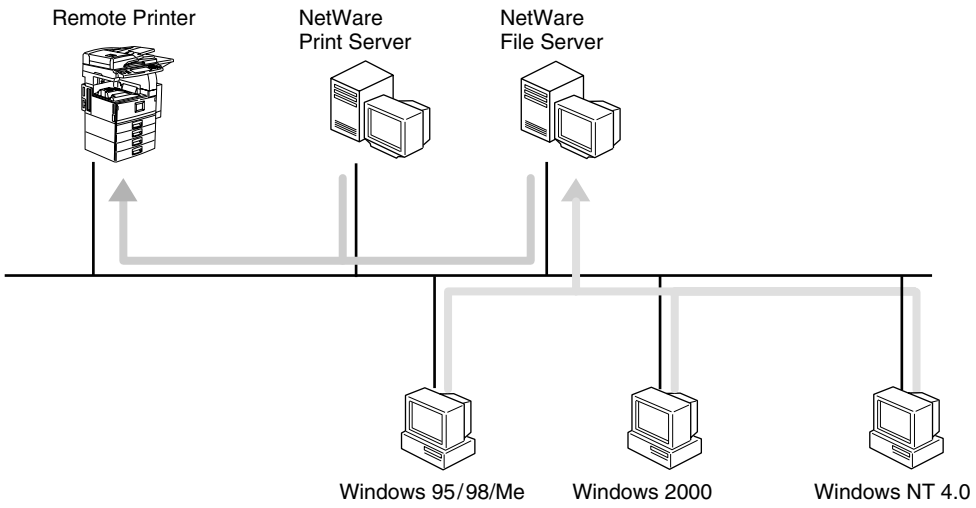


The actual procedures for configuring the machine depend on the NetWare version.

- NetWare 3.x ⇒ P.46 *"Setting Up as a Print Server"*
- NetWare 4.x, 5 ⇒ P.53 *"Setting Up as a Print Server"*

Configuring the machine as a remote printer

If a dedicated NetWare print server is being used, the machine should be configured as a remote printer.

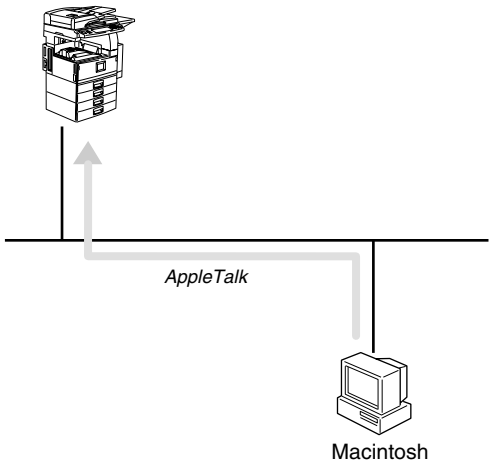


The actual procedures for configuring the machine depend on the NetWare version.

- NetWare 3.x ⇒ P.49 *"Setting Up as a Remote Printer"*
- NetWare 4.x, 5 ⇒ P.57 *"Setting Up as a Remote Printer"*

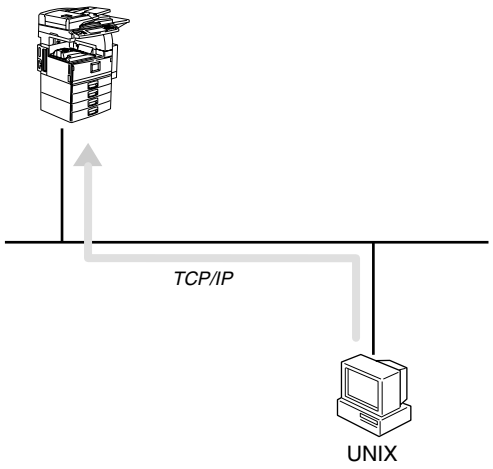
Macintosh

For setting up the machine as a network printer in a Macintosh environment, see P.65 *"Macintosh Configuration"*.



UNIX

For setting up the machine as a network printer in a UNIX environment, see the UNIX Supplement provided as a PDF file on the CD-ROM labeled "Operating Instructions for Printer".



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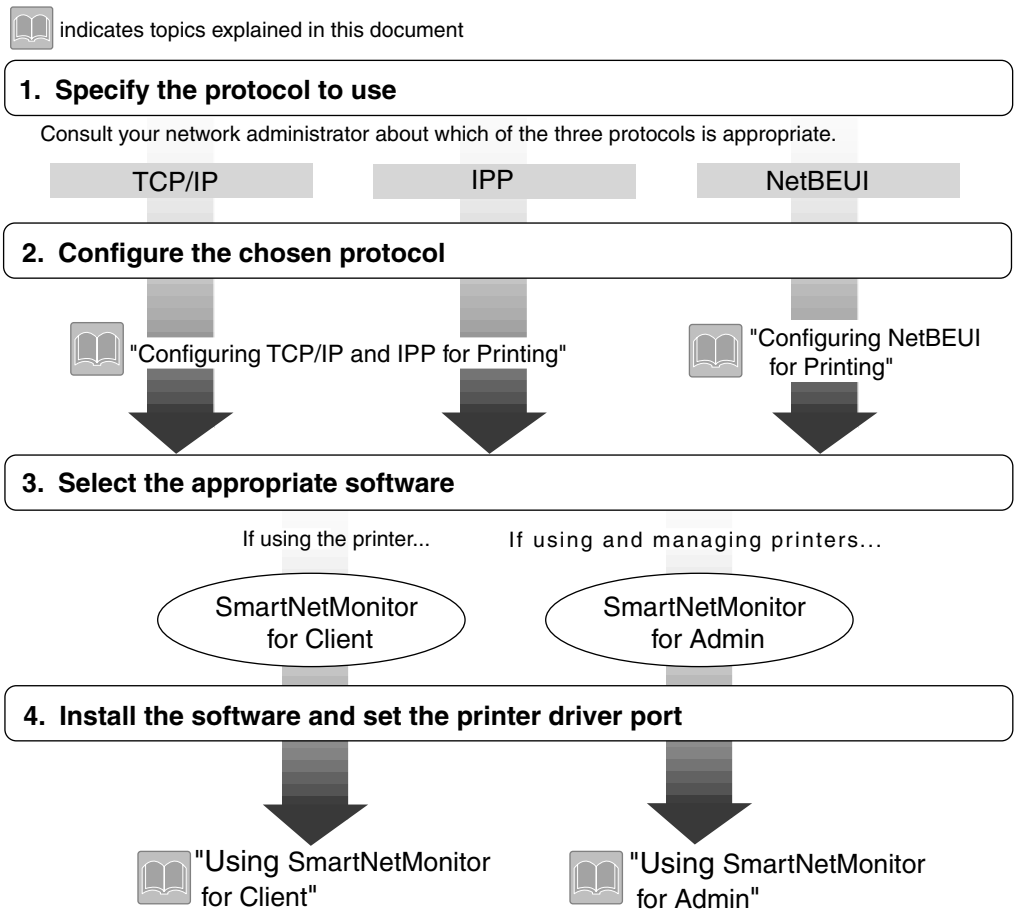
1. Windows 95/98/Me Configuration

Configuring Windows 95/98/Me

Printing Without a Print Server

The following procedure describes how to configure Windows 95/98/Me to use the machine on a network without a Windows 2000 Server, Windows 2000 Professional, Windows NT Server, Windows NT Workstation, or NetWare based print server.


indicates topics explained in this document
1. Specify the protocol to use
Consult your network administrator about which of the three protocols is appropriate.
TCP/IP
IPP
NetBEUI
2. Configure the chosen protocol
"Configuring TCP/IP and IPP for Printing"
"Configuring NetBEUI for Printing"
3. Select the appropriate software
If using the printer...
If using and managing printers...
SmartNetMonitor for Client
SmartNetMonitor for Admin
4. Install the software and set the printer driver port
"Using SmartNetMonitor for Client"
"Using SmartNetMonitor for Admin"

Printing with a Windows 2000 or Windows NT Print Server

See P.10 *"Setting up a Client Computer"* for configuring Windows 95/98/Me with a Windows 2000 or Windows NT print server.

Configuring Protocols

Configuring TCP/IP and IPP for Printing

These instructions are for configuring the Network Interface Board and Windows 95/98/Me to use the TCP/IP protocol and IPP.

Configuring the machine

Configure the machine to use the TCP/IP protocol.

- Make sure that the TCP/IP protocol is set to active. (The default is active.)
- Assign an IP address and make other settings required for using the TCP/IP protocol.

Reference

For more information about how to make the above settings, see the System Settings.

If DHCP is used to assign IP addresses, see P.90 *"When Using DHCP"*.

Note

❒ After setting the IP address, use the ping command to make sure that it has been set correctly.

① Click **[Start]**, point to **[Programs]**, and then click **[MS-DOS Prompt]**.

② Type the following: (Example IP address is 192.168.15.16)

```
C:\> ping 192.168.15.16
```

If the address has been configured correctly, the following message appears.

```
Reply from 192.168.15.16 : bytes=32 time<10ms TTL=32
```

If the address has been configured incorrectly, the following message appears.

```
Request timed out.
```

Configuring a Windows 95/98/Me computer

These steps are for configuring a Windows 95/98/Me computer to use the TCP/IP protocol.

1 Open [Control Panel] and double-click the [Network] icon. Make sure that "TCP/IP" is listed in the [The following network components are installed:] box on the [Configuration] tab.

Note

❒ If the TCP/IP protocol is not installed, click **[Add]** on the **[Configuration]** tab to install it. For more information about installing the TCP/IP protocol, see Windows 95/98/Me Help.

2 Configure the TCP/IP protocol with the appropriate IP address, subnet mask and other settings.

Check with the network administrator that the settings are correct.

Configuring NetBEUI for Printing

These instructions are for configuring the Network Interface Board and Windows 95/98/Me to use the NetBEUI protocol.

Configuring the machine

Configure the machine to use the NetBEUI protocol.

- Make sure that the NetBEUI protocol is set to active. (The default is active.)

Reference

For more information about how to make the above settings, see the System Settings.

Configuring a Windows 95/98/Me computer

Install the NetBEUI protocol on the Windows 95/98/Me computer and set it as the default protocol.

1 Open [Control Panel] and double-click the [Network] icon. Make sure that "NetBEUI" is listed in the [The following network components are installed:] box on the [Configuration] tab.

Note

❒ If the NetBEUI protocol is not installed, click **[Add]** on the **[Configuration]** tab to install it. For more information about installing the NetBEUI protocol, see Windows 95/98/Me Help.

❒ If "NetBEUI →Dial-Up Adaptor" is listed in the **[The following network components are installed:]** box, select it and click **[Remove]** to remove the binding.

2 Set the NetBEUI protocol as the default protocol. Click the [Configuration] tab, select "NetBEUI" in the [The following network components are installed:] box, and click [Properties].

3 Click the [Advanced] tab, select [Set this protocol to be the default protocol], and click [OK].

4 Click [OK] to close the [Network] dialog box.

5 When the message to restart appears, click [Yes].

Using SmartNetMonitor for Client

SmartNetMonitor for Client is a utility that helps you to use network printers effectively. It is useful in environments where two or more network printers are used. It is recommended that you install SmartNetMonitor for Client to use Parallel Printing and Recovery Printing. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

❖ SmartNetMonitor for Client features

- Sends a print job directly to the network printers without using a print server.
- Notifies when a printing error occurs.
- Prints documents using other printers in the printer group when the specified printer is busy (Recovery Printing).
- Equally divides the number of copies to be printed among the selected printers in the printer group (Parallel Printing).

Important

❒ The following must be the same for the specified printer and the printers selected for Recovery Printing or Parallel Printing.

- Printer models
- Installed options (e.g. Paper tray unit)
- Size and orientation of paper in each paper tray unit
- Total memory
- Installed fonts (including the downloaded fonts)

Reference

For more information about installing SmartNetMonitor for Client, see the Printer Unit Type 1045 Printer Reference 1.

Note

❒ Make sure to close all applications before beginning the installation process. Installing SmartNetMonitor for Client may require the computer to be restarted.

Installing SmartNetMonitor for Client

Follow the procedure below to install SmartNetMonitor for Client.

1 Configure the IP parameters on the Network Interface Board using the operation panel.

Reference

For more information about setting IP parameters, see *"Configuring the printer for the Network with the Operation Panel"* in the System Settings.

2 Insert the CD-ROM labeled "Printer Drivers and Utilities" into the CD-ROM drive.

Note

❒ If the installer starts automatically, you can use it to install SmartNetMonitor for Client. Follow the instructions on the screen.

3 Open [Control Panel], and double-click the [Add/Remove Programs] icon.

4 On the [Install/Uninstall] tab, click [Install].

5 Click [Next >].

6 Type the name of the CD-ROM drive in the [Command line for installation program] box, followed by ":\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE" (do not include the quotation marks), and then click [Finish].

Note

❒ An example would be "D:\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE" when the CD-ROM drive letter is "D".

7 From the [Choose Setup Language] list, select the language you want to use, and then click [OK].

8 After the [Welcome] dialog box appears, click [Next >].

Follow the instructions on the screen.

After the installation is complete, configure the printer port with SmartNetMonitor for Client. ⇒ P.7 *"Setting Up the Printer Driver"*

Note

❒ If the dialog box asking if you want to restart the computer appears, select **[Yes, I want to restart my computer now.]**.

Deleting the port

The following procedure allows you to delete the printer port. If you want to delete the port which is currently used in Windows, switch the port to another such as "FILE", and then delete it. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

1. **From the [Printers] window, click the icon of the printer which uses SmartNetMonitor for Client to print. On the [File] menu, click [Properties].**
2. **Click the [Details] tab and make sure that the SmartNetMonitor for Client port is shown in the [Print to the following port] box.**

   Remember the port name because this port should be deleted later.
3. **From the [Print to the following port] box, select [FILE].**
4. **Click [Delete Port].**
5. **Click the SmartNetMonitor for Client port name as in step 2, and then click [OK].**

   The port is deleted.
6. **Click [OK] to close the printer properties.**

Uninstalling SmartNetMonitor for Client

Preparation

Before uninstalling SmartNetMonitor for Client, make sure that:

- The SmartNetMonitor for Client settings dialog box is closed.
- No printer is using the SmartNetMonitor for Client port as a printer port.

1. **Open [Control Panel], and double-click the [Add/Remove Programs] icon.**
2. **On the [Install/Uninstall] tab, click [SmartNetMonitor for Client], and click [Add/Remove].**
3. **After the confirmation message appears, click [Yes].**

   UninstallShield removes all of the components of SmartNetMonitor for Client.
4. **After the confirmation message, click [Yes].**
5. **Acknowledge the [Question] dialog box.**
6. **When the uninstallation is complete, click [OK].**

Setting Up the Printer Driver

The following procedure allows you to configure the printer port to use SmartNetMonitor for Client.

Preparation

The target printer must be turned on before starting the installation process.

1 Install the printer driver of the printer you want to use.

2 From the [Printers] window, click the icon of the printer. On the [File] menu, click [Properties].

3 Click the [Details] tab and click [Add Port].

4 Click [Other], click [SmartNetMonitor] from the list, and then click [OK].

The **[Select Printer]** dialog box appears .

The displayed items are as follows:

Model Name: The model name of the printer.

Name: The name of the Network Interface Board.

Comment: Additional information about the Network Interface Board.

Address: The IP address of the printer.

5 Select the printer.

TCP/IP

❶ Click the printer you want to use, and then click [OK].

Note

❒ Printers that respond to an IP broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]**, and then type the IP address or host name.

❒ You cannot add an address partially similar to that already used. For example, when “192.168.0.2” is already used, “192.168.0.2xx” cannot be used. Similarly, when “192.168.0.20” is already used, “192.168.0.2” cannot be used.

NetBEUI

❶ **Click [NetBEUI].**

A list of printers that can be printed to by the NetBEUI protocol appears.

❷ **Click the printer you want to use, and then click [OK].**

Note

❒ Printers that respond to a broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]**, and then type the NetBEUI address. Make sure that the NetBEUI address is on the configuration page. For more information about the printing of the configuration page, see the Printer Unit Type 1045 Printer Reference 2.

❒ You cannot print to printers beyond routers.

IPP

❶ **Click [IPP].**

The IPP setting dialog box appears.

❷ **In [Printer URL], type "http://(printer's IP address)/printer" as the IP address of the printer.**

(Example IP address is 192.168.15.16)

`http://192.168.15.16/printer`

❸ **As necessary, type the names to distinguish the printer in [IPP Port Name]. Type a name differing from those of any existing port names.**

If you omit this, the address typed in **[Printer URL]** will be set as the IPP port name.

❹ **If using a proxy server and IPP user name, click [Detailed Settings] and configure the necessary settings.**

Note

❒ For more information about these settings, see SmartNetMonitor for Client Help.

6 **Click [OK].**

7 **Make sure that the specified printing port is displayed in the [Print to the following Port] box, and click [OK].**

This completes the settings.

To print, select the specified printer. SmartNetMonitor for Client will now direct print data to the printer automatically.

Changing Port Settings

Follow these steps to change SmartNetMonitor for Client settings, such as Parallel Printing, Recovery Printing, TCP/IP, the proxy server and IPP URL.

Note

❒ There are no settings for the NetBEUI protocol.

❒ You can configure Timeout Settings for the TCP/IP protocol.

1 **From the [Printers] window, click the printer icon. On the [File] menu, click [Properties].**

2 **Click the [Details] tab, and then click [Port Settings].**

The **[Port Settings]** dialog box appears.

- For IPP, you can configure User Settings, Proxy Settings and Timeout Settings.

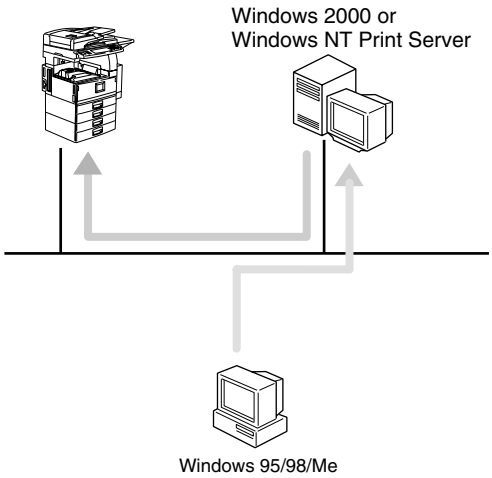
Note

❒ For more information about these settings, see SmartNetMonitor for Client Help.

Setting up a Client Computer

This section describes the procedures for setting up a client on a network that uses Windows 2000, Windows NT Server or Windows NT Workstation as a print server.

To print from Windows 95/98/Me, you must first install the printer driver and change the printer port to the print server.



Note

❒ This section assumes that the client has already been configured to communicate with a Windows 2000 or Windows NT print server. Do not begin the following procedure until the client has been set up and configured correctly.

1 Install the printer driver as a local printer.

Reference

For more information about installing the printer driver, see the Printer Unit Type 1045 Printer Reference 1.

Note

❒ Any port can be selected during the installation, however, LPT1 is recommended.

2 Click [Start], point to [Settings], and then click [Printers].

3 Click the icon of the printer you want to use. On the [File] menu, click [Properties].

4 Click the [Details] tab, and click [Add Port].

5 Click [Network], and click [Browse].

6 On the network tree, double-click the name of the computer used as the print server.

The printers connected to the network are displayed.

7 Click the name of the printer you want to use, and click [OK].

8 Click [OK].

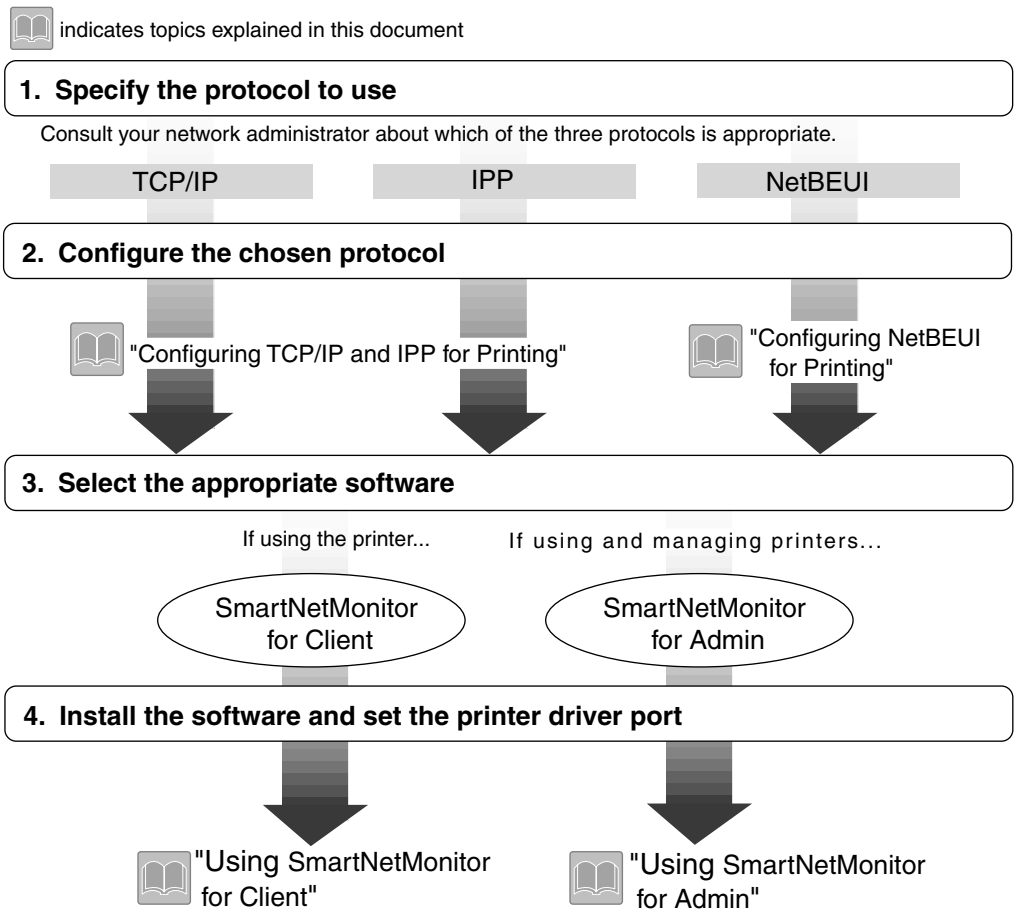
9 Make sure that the port name is displayed in the [Print to the following port] box, and click [OK].

2. Windows 2000 Configuration

Configuring Windows 2000

Printing Without a Print Server

The following procedure describes how to configure Windows 2000 to use the machine on a network without a Windows 2000, Windows NT Server, Windows NT Workstation or NetWare based print server.


indicates topics explained in this document
1. Specify the protocol to use
Consult your network administrator about which of the three protocols is appropriate.
TCP/IP
IPP
NetBEUI
2. Configure the chosen protocol
"Configuring TCP/IP and IPP for Printing"
"Configuring NetBEUI for Printing"
3. Select the appropriate software
If using the printer...
If using and managing printers...
SmartNetMonitor for Client
SmartNetMonitor for Admin
4. Install the software and set the printer driver port
"Using SmartNetMonitor for Client"
"Using SmartNetMonitor for Admin"

Printing with a Standard TCP/IP Port

Standard TCP/IP port is a standard port of Windows 2000 to enable Peer-to-Peer printing in a network environment.

For more information about Standard TCP/IP port settings, see Windows 2000 Help.

Printing with a LPR Port

See P.23 *"Configuring LPR Port Printing"* for configuring a LPR port in Windows 2000.

Printing with a Windows 2000 or Windows NT Print Server

See P.24 *"Setting up a Client Computer"* for configuring Windows 2000 with a Windows 2000 or Windows NT print server.

Configuring the Protocols

Configuring TCP/IP and IPP for Printing

Follow these instructions to configure the Network Interface Board and Windows 2000 to use the TCP/IP protocol and IPP.

Configuring the machine

Configure the machine to use the TCP/IP protocol.

- Make sure that the TCP/IP protocol is set to active. (The default is active.)
- Assign an IP address and make other settings required for using the TCP/IP protocol.

Reference

For more information about how to make the above settings, see the System Settings.

If DHCP is used to assign IP addresses, see P.90 *"When Using DHCP"*.

Note

❒ After setting the IP address, use the ping command to make sure that it has been set correctly.

① Click **[Start]**, point to **[Programs]**, point to **[Accessories]**, and then click **[Command Prompt]**.

② Type the following: (Example IP address is 192.168.15.16)
`C:\> ping 192.168.15.16`
If the address has been configured correctly, the following message appears.
`Reply from 192.168.15.16 : bytes=32 time<10ms TTL=32`
If the address has been configured incorrectly, the following message appears.
`Request timed out.`

Configuring a Windows 2000 computer

Follow these steps to configure a Windows 2000 computer to use the TCP/IP protocol.

1 Click [Start] on the taskbar, point to [Settings], and then click [Network and Dial-up Connections].

2 Click [Local Area Connection]. On the [General] tab, click [Properties].

3 **Make sure that the"Internet Protocol (TCP/IP)" is selected in the [Components checked are used by this connection:] box on the [General] tab.**

Note

❒ Select the TCP/IP protocol box if it is not already selected.

❒ If the TCP/IP protocol is not installed, click **[Install]** on the **[General]** tab to install it. For more information about installing the TCP/IP protocol, see Windows 2000 Help.

4 **Configure the TCP/IP protocol with the appropriate IP address, subnet mask and other settings.**

Check with the network administrator that the settings are correct.

Configuring NetBEUI for Printing

Follow these instructions to configure the Network Interface Board and Windows 2000 to use the NetBEUI protocol.

Configuring the machine

Configure the machine to use the NetBEUI protocol.

- Make sure that the NetBEUI protocol is set to active. (The default is active.)

Reference

For more information about how to make the above settings, see the System Settings.

Configuring a Windows 2000 computer

Follow these steps to configure a Windows 2000 computer to use the NetBEUI protocol.

1 **Click [Start] on the taskbar, point to [Settings], and then click [Network and Dial-up Connections].**

2 **Click [Local Area Connection]. On the [General] tab, click [Properties].**

3 **Make sure that the"NetBEUI Protocol" is selected in the [Components checked are used by this connection:] box on the [General] tab.**

Note

❒ Select the NetBEUI protocol box if it is not already selected.

❒ If the NetBEUI protocol is not installed, click **[Install]** on the **[General]** tab and install it. For more information about installing the NetBEUI protocol, see Windows 2000 Help.

Using SmartNetMonitor for Client

SmartNetMonitor for Client is a utility that helps you to use network printers effectively. It is useful in environments where two or more network printers are used. It is recommended that you install SmartNetMonitor for Client to use Parallel Printing and Recovery Printing. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

❖ SmartNetMonitor for Client features

- Sends a print job directly to the network printers without using a print server.
- Notifies when a printing error occurs.
- Prints documents using other printers in the printer group when the specified printer is busy (Recovery Printing).
- Equally divides the number of copies to be printed among the selected printers in the printer group (Parallel Printing).

Important

❒ The following must be the same for the specified printer and the printers selected for Recovery Printing or Parallel Printing.

- Printer models
- Installed options (e.g. Paper tray unit)
- Size and orientation of paper in each paper tray unit
- Total memory
- Installed fonts (including the downloaded fonts)

Reference

For more information about installing SmartNetMonitor for Client, see the Printer Unit Type 1045 Printer Reference 1.

Note

❒ Make sure to close all applications before beginning the installation process. Installing SmartNetMonitor for Client may require the computer to be restarted.

Installing SmartNetMonitor for Client

Follow the procedure below to install SmartNetMonitor for Client.

1 Configure the IP parameters on the Network Interface Board using the operation panel.

Reference

For more information about setting IP parameters, see *"Configuring the printer for the Network with the Operation Panel"* in the System Settings.

2 Insert the CD-ROM labeled "Printer Drivers and Utilities" into the CD-ROM drive.

Note

❒ If the installer starts automatically, you can use it to install SmartNetMonitor for Client. Follow the instructions on the screen.

3 Open [Control Panel], and double-click the [Add/Remove Programs] icon.

4 Click [Add New Programs], and then click [CD or Floppy].

5 Click [Next >].

6 Type the name of the CD-ROM drive in the [Open] box, followed by ":\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE" (do not include the quotation marks), and then click [Finish].

Note

❒ An example would be "D:\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE" when the CD-ROM drive letter is "D".

7 From the [Choose Setup Language] list, select the language you want to use, and then click [OK].

8 After the [Welcome] dialog box appears, click [Next >].

Follow the instructions on the screen.

After the installation is complete, configure the printer port with SmartNetMonitor for Client. ⇒ P.20 *"Setting Up the Printer Driver"*

Note

❒ If the dialog box asking if you want to restart the computer appears, select **[Yes, I want to restart my computer now.]**.

Deleting the port

The following procedure allows you to delete the printer port. If you want to delete the port which is currently used in Windows, switch the port to another such as "FILE", then delete it. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

1. **From the [Printers] window, click the icon of the printer which uses SmartNetMonitor for Client to print. On the [File] menu, click [Properties].**
2. **Click the [Ports] tab and make sure that the SmartNetMonitor for Client port is shown in the [Print to the following port(s)] box.**
   Remember the port name because this port should be deleted later.
3. **Select the [FILE] check box in the [Port] column.**
4. **Click [OK] to close the Printer Properties.**
   The port which is currently in use is changed.
5. **Open the Printer Properties of the same printer.**
6. **Select the [Ports] tab.**
7. **At the [Port] column in the [Print to the following port(s)] dialog box, click to select the SmartNetMonitor for Client port name as in step 2.**
8. **Click [Delete Port].**
9. **When the confirmation message appears, click [Yes].**
   The port is deleted.
10. **Click [Close] to close the Printer Properties.**

Uninstalling SmartNetMonitor for Client

Preparation

Before uninstalling SmartNetMonitor for Client, make sure that:

- The port settings dialog box is closed.
- No printer is using the SmartNetMonitor for Client port as a printer port.

1. **Open [Control Panel], and double-click the [Add/Remove Programs] icon.**
2. **Click the [Change or Remove Programs] tab, click [SmartNetMonitor for Client], and click [Change/Remove].**
3. **After the confirmation message appears, click [Yes].**
   UninstallShield removes all of the components of SmartNetMonitor for Client.

4 **After the confirmation message appears, click [Yes].**

5 **Acknowledge the [Remove Shared File?] dialog box.**

6 **When the uninstallation is complete, click [OK].**

Setting Up the Printer Driver

The following procedure allows you to configure the printer port to use SmartNetMonitor for Client.

Preparation

The target printer must be turned on before starting the installation process.

1 **Install the printer driver for the printer you want to use.**

2 **From the [Printers] window, click the icon of the printer. On the [File] menu, click [Properties].**

3 **Click the [Ports] tab and click [Add Port].**

4 **Click [SmartNetMonitor for Client] in the [Available port types:] box, and then click [New Port].**

The **[Select Printer]** dialog box appears and printers on the network are browsed.

The displayed items are as follows:

Model Name: The model name of the printer.

Name: The name of Network Interface Board.

Comment: Additional information about Network Interface Board.

Address: The IP address of the printer.

5 **Select the printer.**

TCP/IP

❶ **Click the printer you want to use, and then click [OK].**

Note

❒ Printers that respond to an IP broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]** and then type the IP address or host name.

NetBEUI

❶ **Click [NetBEUI].**

A list of printers that can be printed by the NetBEUI protocol appears.

❷ **Click the printer you want to use, and then click [OK].**

Note

❒ Printers that respond to a broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]** and then type the NetBEUI address. Make sure that the NetBEUI address is on the configuration page. For information about the printing of the configuration page, see the Printer Unit Type 1045 Printer Reference 1.

❒ You cannot print to printers beyond routers.

IPP

❶ **Click [IPP].**

The IPP setting dialog box appears.

❷ **In [Printer URL], type "http://(printer's IP address)/printer" as the IP address of the printer.**

(Example IP address is 192.168.15.16)

`http://192.168.15.16/printer`

❸ **As necessary, type the names to distinguish the printer in [IPP Port Name]. Type a name different from those of any existing port names.**

If you omit this, the address entered in **[Printer URL]** will be set as the IPP port name.

❹ **If using a proxy server and IPP user name, click [Detailed Settings] and configure the necessary settings.**

Note

❒ For more information about these setting, see SmartNetMonitor for Client Help.

6 **Click [OK].**

7 **Make sure that the specified printing port is displayed in the [Print to the following Port(s)] box, and click [Close].**

This completes the settings.

To print, select the specified printer. SmartNetMonitor for Client will now direct print data to the printer automatically.

Changing Port Settings

Follow the steps to change SmartNetMonitor for Client settings, such as Parallel Printing, Recovery Printing, TCP/IP, the proxy server and IPP URL.

Note

❒ There are no settings for the NetBEUI protocol.

1 From the [Printers] window, click the icon of the printer you want to use. On the [File] menu, click [Properties].

2 Click the [Ports] tab, and then click [Configure Port].

The **[Port Settings]** dialog box appears

- For TCP/IP protocol, you can configure Parallel Printing, Recovery Printing and Timeout Settings.
- For IPP, you can configure User Settings, Proxy Settings and Timeout Settings.

Note

❒ For more information about these settings, see SmartNetMonitor for Client Help.

Configuring LPR Port Printing

This section explains the procedure for printing to a LPR port from Windows 2000.

Note

❒ The TCP/IP protocols must be installed and configured correctly. For more information about configuring the protocols, see P.15 *"Configuring TCP/IP and IPP for Printing"*.

1 **Click [Start], point to [Settings], and then click [Printers].**

The **[Printers]** window appears.

2 **Click the icon of the printer you want to use. On the [File] menu, click [Properties].**

3 **Click the [Ports] tab and click [Add Port].**

4 **In the [Available port types:] box, click "LPR Port", and then click [New Port].**

Note

❒ If "LPR Port" does not appear, "Print Services for Unix" has not been installed.

5 **Type the IP address of the Network Interface Board into the [Name or address of server providing lpd:] box.**

6 **Type "lp" into the [Name of printer or print queue on that server box:], and click [OK].**

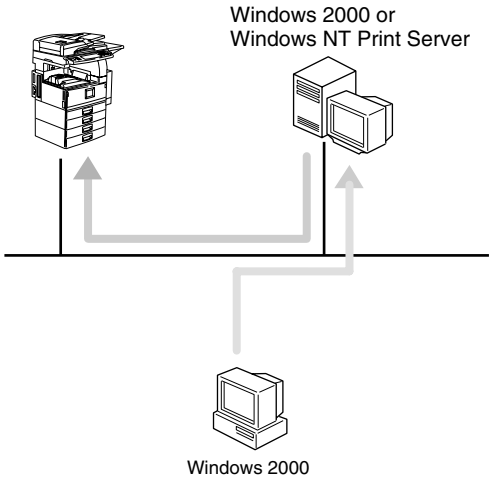
7 **Click [Close].**

8 **Make sure that the port name is displayed in the [Print to the following port(s)] box and that the check box is selected, and then click [OK].**

Setting up a Client Computer

This section describes the procedures for setting up a client in a network that uses Windows 2000, Windows NT Server or Windows NT Workstation as a print server.

To print from Windows 2000, you must first install the printer driver and change the printer port to the print server.



Note

❒ This section assumes that the client has already been configured to communicate with a Windows 2000 or Windows NT print server. Do not begin the following procedure until the client has been set up and configured correctly.

Use the **[Printers]** window to set up the printer.

1. **Click [Start], point to [Settings] and then click [Printers].**
2. **Double-click the [Add Printer] icon.**

   This launches the Add Printer Wizard.
3. **Click [Next >].**
4. **Click [Network printer], and click [Next >].**
5. **Click [Next >].**
6. **In the [Shared printers:] box, double-click the name of the computer used as a print server.**

   The printers attached to the network are displayed.

7 **Click the printer you want to use, and click [Next >].**

Note

❒ If the printer driver is not installed in the print server, a message appears. If a driver has been installed on the client, click **[OK]**, and follow the instructions on the screen.

❒ There is a Windows 2000 printer driver on the CD-ROM labeled "Printer Drivers and Utilities".

8 **Select whether to use this printer as the default printer, and click [Next >].**

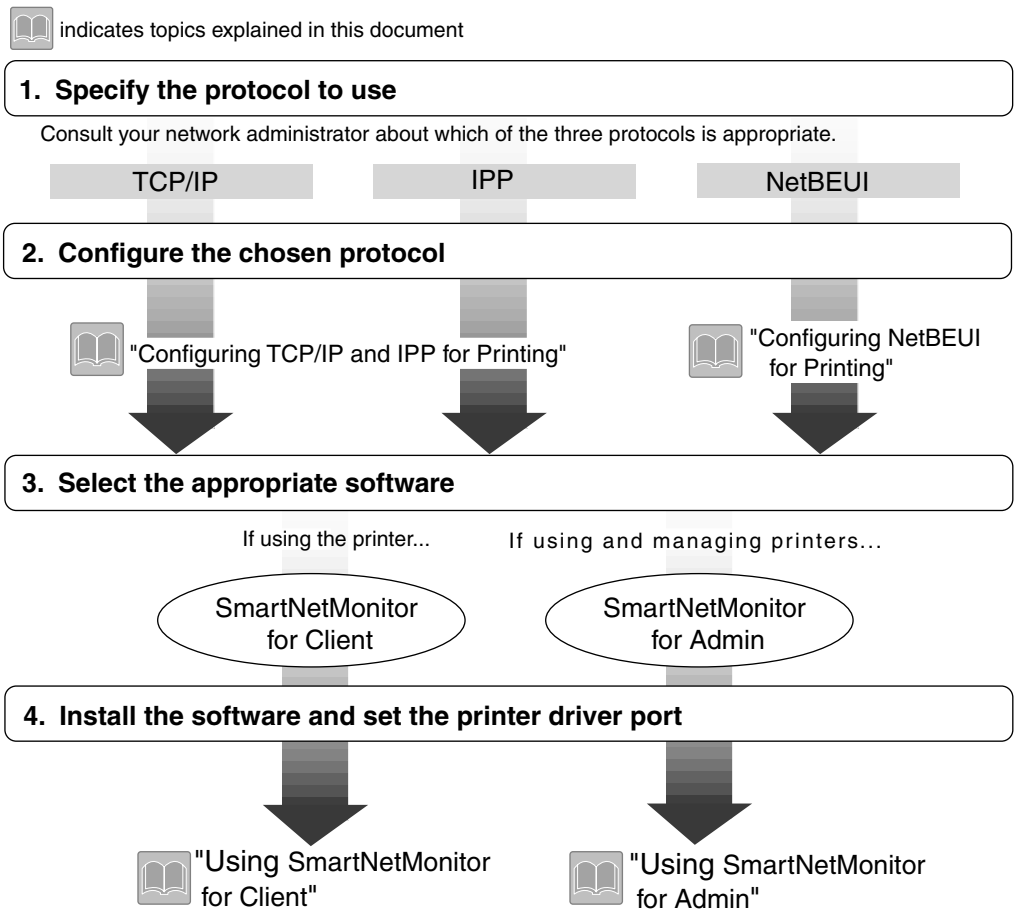
9 **After the installation is complete, click [Finish].**

The icon of the newly installed printer appears in the **[Printers]** window.

Configuring Windows NT 4.0

Printing Without a Print Server

The following procedure describes how to configure Windows NT 4.0 to use the machine on a network without a Windows 2000, Windows NT Server, Windows NT Workstation or NetWare based print server.


indicates topics explained in this document
1. Specify the protocol to use
Consult your network administrator about which of the three protocols is appropriate.
TCP/IP
IPP
NetBEUI
2. Configure the chosen protocol
"Configuring TCP/IP and IPP for Printing"
"Configuring NetBEUI for Printing"
3. Select the appropriate software
If using the printer...
If using and managing printers...
SmartNetMonitor for Client
SmartNetMonitor for Admin
4. Install the software and set the printer driver port
"Using SmartNetMonitor for Client"
"Using SmartNetMonitor for Admin"

Printing with a LPR Port

See P.38 *"Configuring LPR Port Printing"* for how to configure a LPR port in Windows NT 4.0.

Printing with a Windows 2000 or Windows NT Print Server

See P.39 *"Setting up a Client Computer"* for configuring Windows NT 4.0 with a Windows 2000 or Windows NT print server.

Configuring the Protocols

Configuring TCP/IP and IPP for Printing

These instructions are for configuring the Network Interface Board and Windows NT to use the TCP/IP protocol and IPP.

Configuring the machine

Configure the machine to use the TCP/IP protocol.

- Make sure that the TCP/IP protocol is set to active. (The default is active.)
- Assign an IP address and make other settings required for using the TCP/IP protocol.

Reference

For more information about how to make the above settings, see the System Settings.

If DHCP is used to assign IP addresses, see P.90 *"When Using DHCP"*.

Note

❒ After setting the IP address, use the ping command to make sure that it has been correctly set.

① Click **[Start]**, point to **[Programs]**, and then click **[Command Prompt]**.

② Type the following: (Example IP address is 192.168.15.16)

```
C:\> ping 192.168.15.16
```

If the address has been configured correctly, the following message appears.

```
Reply from 192.168.15.16 : bytes=32 time<10ms TTL=32
```

If the address has been configured incorrectly, the following message appears.

```
Request timed out.
```

Configuring a Windows NT computer

These steps are for configuring a Windows NT computer to use the TCP/IP protocol.

1 Open [Control Panel] and double-click the [Network] icon. Make sure that "TCP/IP Protocol" is listed in the [Network protocols] box on the [Protocols] tab.

Note

❒ If the TCP/IP protocol is not installed, click **[Add]** on the **[Protocols]** tab to install it. For more information about installing the TCP/IP protocol, see Windows NT Help.

2 Configure the TCP/IP protocols with the appropriate IP address, subnet mask and other settings.

Check with the network administrator that the settings are correct.

3 Click the [Services] tab, and make sure that "Microsoft TCP/IP Printing" is installed.

If "Microsoft TCP/IP Printing" is not installed, click **[Add]** on the **[Services]** tab, to install it. For more information about installing and configuring network services, see Windows NT Help.

Configuring NetBEUI for Printing

These instructions are for configuring the Network Interface Board and Windows NT to use the NetBEUI protocol.

Configuring the machine

Configure the machine to use the NetBEUI protocol.

- Make sure that the NetBEUI protocol is set to active. (The default is active.)

Reference

For more information about how to make the above settings, see the System Settings.

Configuring a Windows NT computer

Install the NetBEUI protocol on the Windows NT computer, and change the LAN adapter number (Lana Number).

1 Open [Control Panel] and double-click the [Network] icon. Make sure that "NetBEUI Protocol" is listed in the [Network Protocols] box on the [Protocols] tab.

Note

❒ If the NetBEUI protocol is not installed, click **[Add]** on the **[Protocols]** tab to install it. For more information about installing the NetBEUI protocol, see Windows NT Help.

2 Change the Lana Number. Click the [Services] tab, click "NetBIOS Interface" in the [Services] tab, and click [Properties].

3 Click the Lana Number corresponding the Nbf protocol of the [Network Route] headline, and click [Edit].

4 **Type "0" as the Lana Number.**

Note

❒ If the other protocol's Lana Number is configured with "0", you must change the Lana Number a number other than "0".

5 **Click [OK].**

6 **Click [Close], and close the [Network] dialog box.**

7 **After acknowledging the message to restart, click [Yes].**

Note

❒ After you change the Lana Number, you must restart the computer.

Using SmartNetMonitor for Client

SmartNetMonitor for Client is a utility that helps you to use network printers effectively. It is useful in environments where two or more network printers are used. It is recommended that you install SmartNetMonitor for Client to use Parallel Printing and Recovery Printing. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

❖ SmartNetMonitor for Client features

- Sends a print job directly to the network printers without using a print server.
- Notifies when a printing error occurs.
- Prints documents using other printers in the printer group when the specified printer is busy (Recovery Printing).
- Equally divides the number of copies to be printed among the selected printers in the printer group (Parallel Printing).

Important

❒ The following must be the same for the specified printer and the printers selected for Recovery Printing or Parallel Printing.

- Printer models
- Installed options (e.g. Paper tray unit)
- Size and orientation of paper in each paper tray unit
- Total memory
- Installed fonts (including the downloaded fonts)

Reference

For more information about installing the SmartNetMonitor for Client, see the Printer Unit Type 1045 Printer Reference 1.

Limitation

❒ On a computer that is used as a print server, do not use the features such as Parallel Printing, Recovery Printing and Notify. For more information about turning off these features, see SmartNetMonitor for Client Help.

Note

❒ Make sure to close all applications before beginning the installation process. Installing SmartNetMonitor for Client may require the computer to be restarted.

Installing SmartNetMonitor for Client

Follow the procedure below to install SmartNetMonitor for Client.

1 Configure the IP parameters on the Network Interface Board using the operation panel.

Reference

For more information about setting IP parameters, see *"Configuring the printer for the Network with the Operation Panel"* in the System Settings.

2 Insert the CD-ROM labeled "Printer Drivers and Utilities" into the CD-ROM drive.

Note

❒ If the installer starts automatically, you can use it to install SmartNetMonitor for Client. Follow the instructions on the screen.

3 Open [Control Panel], and double-click the [Add/Remove Programs] icon.

4 On the [Install/Uninstall] tab, click [Install].

5 Click [Next >].

6 Type the name of the CD-ROM drive in the [Command line for installation program] box, followed by ":\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE" (do not include the quotation marks), and then click [Finish].

Note

❒ An example would be "D:\ NETWORK \ NETMON \ CLIENT \ DISK1 \ SETUP.EXE" when the CD-ROM drive letter is "D".

7 From the [Choose Setup Language] list, select the language you want to use, and then click [OK].

8 After the [Welcome] dialog box appears, click [Next >].

Follow the instructions on the screen.

After the installation is complete, configure the printer port with SmartNetMonitor for Client. ⇒ P.35 *"Setting Up the Printer Driver"*

Note

❒ If the dialog box asking if you want to restart the computer appears, select **[Yes, I want to restart my computer now.]**.

Deleting the port

The following procedure allows you to delete the printer port. If you want to delete the port which is currently used in Windows, switch the port to another such as "FILE", then delete it. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

1. **From the [Printers] window, click the icon of the printer which uses SmartNetMonitor for Client to print. On the [File] menu, click [Properties].**
2. **Click the [Ports] tab and make sure that the SmartNetMonitor for Client port is shown in the [Print to the following port] box.**
   Remember the port name because this port should be deleted later.
3. **From the [Print to the following port] box, select [FILE].**
4. **Click [Apply].**
   The port which is currently in use is changed.
5. **Click [Delete Port].**
6. **After the confirmation message appears, click [Yes].**
   The port is deleted.
7. **Click [OK] to close the printer properties.**

Uninstalling SmartNetMonitor for Client

Preparation

Before uninstalling SmartNetMonitor for Client, make sure that:

- The port settings dialog box is closed.
- No printer is using the SmartNetMonitor for Client port as a printer port.

1. **Open [Control Panel], and double-click the [Add/Remove Programs] icon.**
2. **On the [Install/Uninstall] tab, click [SmartNetMonitor for Client] and click [Add/Remove].**
3. **After the confirmation message appears, click [Yes].**
   UninstallShield removes all of the components of SmartNetMonitor for Client.
4. **After a confirmation message appears, click [Yes].**
5. **Acknowledge the [Remove Shared File?] dialog box.**
6. **When the uninstallation is complete, click [OK].**

Setting Up the Printer Driver

The following procedure allows you to configure the printer port to use SmartNetMonitor for Client.

Preparation

The target printer must be turned on before starting the installation process.

1 Install the printer driver of the printer you want to use.

2 From the [Printers] window, click the icon of the printer. On the [File] menu, click [Properties].

3 Click the [Ports] tab and click [Add Port].

4 Click [SmartNetMonitor] from the list, and then click [New Port...].

The **[Select Printer]** dialog box appears .

The displayed items are as follows:

Model Name: The model name of the printer.

Name: The name of the Network Interface Board.

Comment: Additional information about the Network Interface Board.

Address: The IP address of the printer.

5 Select the printer.

TCP/IP

❶ Click the printer you want to use, and then click [OK].

Note

❒ Printers that respond to an IP broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]**, and then type the IP address or host name.

NetBEUI

❶ Click [NetBEUI].

A list of printers that can be printed by the NetBEUI protocol appears.

❷ Click the printer you want to use, and then click [OK].

Note

❒ Printers that respond to a broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]** and then type the NetBEUI address. Make sure that the NetBEUI address is on the configuration page. For information about the printing of the configuration page, see the Printer Unit Type 1045 Printer Reference 2.

❒ You cannot print to printers beyond routers.

IPP

❶ **Click [IPP].**

The IPP setting dialog box appears.

❷ **In [Printer URL], type "http://(printer's IP address)/printer" as the IP address of the printer.**

(Example IP address is 192.168.15.16)

```
http://192.168.15.16/printer
```

❸ **As necessary, type the names to distinguish the printer in [IPP Port Name]. Type a name different from those of any existing port names.**

If you omit this, the address entered in **[Printer URL]** will be set as the IPP port name.

❹ **If using a proxy server and IPP user name, click [Detailed Settings] and configure the necessary settings.**

Note

❒ For more information about these setting, see SmartNetMonitor for Client Help.

6 **Click [OK].**

7 **Make sure that the specified printing port is displayed in the [Print to the following Port] box, and then click [OK].**

This completes the settings.

To print, select the printer specified here. SmartNetMonitor for Client will now direct print data to the printer automatically.

Changing Port Settings

Follow the steps to change SmartNetMonitor for Client settings, such as Parallel Printing, Recovery Printing, TCP/IP, the proxy server settings and IPP URL.

Note

❒ There are no settings for the NetBEUI protocol.

1 **From the [Printers] window, click the icon of the printer you want to use. On the [File] menu, click [Properties].**

2 **Click the [Ports] tab, and then click [Port Configuration].**

The **[Port Settings]** dialog box appears

- For TCP/IP protocol, you can configure Recovery Printing, Parallel Printing and Timeout Settings.
- For IPP, you can configure User Settings, Proxy Settings and Timeout Settings.

Note

❒ For more information about these settings, see SmartNetMonitor for Client Help.

Configuring LPR Port Printing

This section explains the procedure for printing to a LPR port from Windows NT.

Note

❒ The following procedure assumes that the printer drivers have already been installed. This is the procedure to change the printer port to LPR.

❒ The TCP/IP protocols must be installed and configured correctly. For more information about configuring the protocol, see P.29 *"Configuring TCP/IP and IPP for Printing"*.

1. **Click [Start], point to [Settings], and then click [Printers].**
2. **Click the icon of the printer you want to use. On the [File] menu, click [Properties].**
3. **Click the [Ports] tab, and then click [Add Port].**
4. **In the [Available Printer Ports] box, click "LPR Port", and then click [New Port].**

   Note

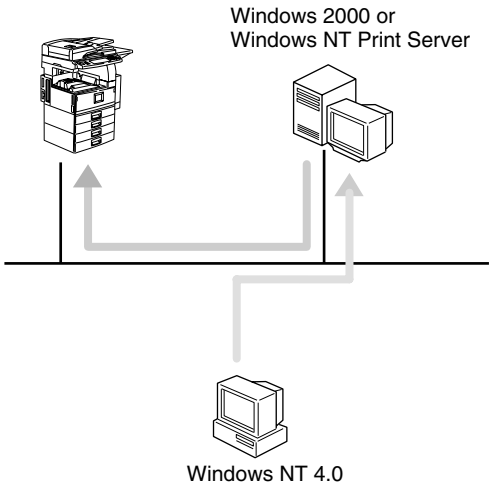
   ❒ If "LPR Port" does not appear, "Microsoft TCP/IP Printing" has not been installed.

5. **Type the IP address of the Network Interface Board into the [Name or address of server providing lpd] box.**
6. **Type "lp" into the [Name of printer or print queue on that server] box, and click [OK].**
7. **Click [Close].**
8. **Make sure that the port name is displayed in the [Print to the following port(s)] box and the check box is selected, and then click [OK].**

Setting up a Client Computer

This section describes the procedures for setting up a client in a network that uses Windows 2000, Windows NT Server or Windows NT Workstation as a print server.

To print from Windows NT 4.0, you must first install the printer driver and change the printer port to the print server.



Note

❒ This section assumes that the client has already been configured to communicate with a Windows 2000 or Windows NT print server. Do not begin the following procedure until the client has been set up and configured correctly.

Use the **[Printers]** window to set up the printer.

1 Click [Start], point to [Settings], and then click [Printers].

2 Double-click the [Add Printer] icon.

This launches the Add Printer Wizard.

3 Click [Network printer server] and click [Next >].

4 In the [Shared Printers] box, double-click the name of the computer used as a print server.

The printers attached to the network are displayed.

5 Click the printer you want to use and click [OK].

Note

❒ If the printer driver is not installed in the print server, a message appears. If a driver has been installed on the client, click **[OK]** and follow the instructions on the screen.

❒ There is a Windows NT printer driver on the CD-ROM labeled "Printer Drivers and Utilities".

6 **Select if you want to use this printer as the default printer, and click [Next >].**

7 **After the installation is complete, click [Finish].**

The icon of the newly installed printer appears in the **[Printers]** window.

4. NetWare Configuration

This chapter describes how to configure the machine to use as a print server or a remote printer in a NetWare environment.

Note

❒ NetWare must be set to active using the machine's control panel. For more information about how to set it, see the System Settings.

Installing the NIB Setup Tool

A utility called the NIB Setup Tool is provided to configure the machine to work in a network environment. This section describes how to install the SmartNetMonitor for Admin, and how to run the NIB Setup Tool.

Limitation

❒ The NIB Setup Tool is supported to work with the following operating systems.

- Microsoft Windows 95/98/Me
- Microsoft Windows 2000
- Microsoft Windows NT 4.0

Installing SmartNetMonitor for Admin

Follow these steps to install the SmartNetMonitor for Admin.

Preparation

You should install the SmartNetMonitor for Admin on the computer. If you install the SmartNetMonitor for Admin from a file server or run it via the network, the SmartNetMonitor for Admin might not work correctly.

Make sure to close all applications before starting the installation procedure.

1 Close all the applications that are currently running.

2 Insert the CD-ROM labeled "Printer Drivers and Utilities" into the CD-ROM drive.

If the installer starts automatically, follow the instructions on the screen.

If not, go to step 3.

3 Open [Control Panel], and double-click the [Add/Remove Programs] icon.

4 On the [Install/Uninstall] tab, click [Install].

5 Click [Next >].

6 In the [Command line for installation program] box, type the name of the CD-ROM drive followed by ":\ NETWORK\NETMON\ADMIN\DISK1\SETUP.EXE" (do not include the quotation marks), and then click [Finish].

Note

❒ An example would be "D:\ NETWORK\NETMON\ADMIN\DISK1\SETUP.EXE" when the CD-ROM drive name is "D".

7 From the [Choose Setup Language] list, select the language you want to use, and then click [OK].

8 After the [Welcome] dialog box appears, click [Next >].

9 The [Software License Agreement] dialog box appears.

After reading through all of the contents by clicking **[▼]**, click **[Yes]** to agree with the License Agreement.

10 Select a folder to install the SmartNetMonitor for Admin in, and then click [Next >].

If you want to change the displayed folder, click **[Browse]** to select another one.

The installation program starts.

When the confirmation dialog box appears, the installation program is complete.

Running the NIB Setup Tool

1 Click [Start], point to [Programs], and then click [NIB Setup Tool] in the [SmartNetMonitor for Admin] program folder.

Quick Setup Using the NIB Setup Tool Wizard

With the NIB Setup Tool, you can easily set up a NetWare printing environment.

Reference

For more information about installing the NIB Setup Tool, see P.41 *"Installing the NIB Setup Tool"*.

You can select **[Wizard]** or **[Property Sheet]** as an installation method.

When you configure the Network Interface Board for the first time, use the Wizard method.

If you want to use the Property Sheet method, see P.46 *"NetWare 3.x - Advanced Settings"* or P.52 *"NetWare 4.x, 5 - Advanced Settings"*.

Note

❒ This section assumes that NetWare is functional and that the necessary environment for NetWare Print Services is available.

❒ If you configure the Network Interface Board in a NetWare environment using the NIB Setup Tool, you should install the client software released from Novell in the following cases.

- Windows 95/98/Me in NDS mode configuration
- Windows NT 4.0 in NDS mode configuration
- Windows NT 4.0 in Bindery mode configuration
- Windows 2000 in NDS mode configuration
- Windows 2000 in Bindery mode configuration

1 Log on to the Netware file server or the NDS tree as an Admin or Admin equivalent.

2 Run the NIB Setup Tool.

Reference

⇒ P.42 *"Running the NIB Setup Tool"*

3 Click [Wizard] and click [OK].

The **[NIB Setup Tool - Network board list]** dialog box of the Network Interface Board appears.

4 Click [IPX protocol].

5 Click to select the IPX address of the Network Interface Board you are configuring, and click [Next >].

Note

❒ If you do not know which Network Interface Board you are configuring, print a network configuration page to check the MAC address (Network address).

6 Make sure that the MAC address and IPX address are correct, and click [Finish].

7 Type the print server name into the [Device Name] box, and click [Next >].

The default setting is "RDP_" followed by the 6 digit serial number. We recommend that you change it to something that is easier to remember or something based on the structure of the network.

8 In a dialog box for selecting a network environment, click to select the [NetWare] check box and click to clear the [TCP/IP] check box.

9 Click [Next >].

A dialog box for configuring the NetWare environment appears.

10 Select [Bindery] when printing under Bindery mode, or select [NDS] when printing under NDS mode.

When you are using NetWare version 4.x, you should select **[NDS]**.

11 If you selected [Bindery], type into the [File Server Name:] box the name of the file server in which a print server is to be created.

After clicking **[Browse]**, you can select a file server among those listed in the **[Browse]** dialog box.

12 If you selected [NDS], type into the [Tree:] box the name of the NDS tree in which the print server is created, and type the context into the [Context:] box.

Clicking **[Browse]**, you can select an NDS tree and an NDS context among those listed in the **[Browse]** dialog boxes.

As a context, object names are typed from a lower object and divided by a period. For example, if you want to create a print server into NET under DS, type "NET.DS".

13 Click [Next >].

14 Type the name of the printer into the [Printer Name] box, and the name of the print queue into the [Print Queue Name] box.

The default setting for Printer Name is "Print Server Name" followed by "_1" and for Print Queue Name is "Print Server Name" followed by "_Q" (quotation marks are not included). You can change them if necessary.

⓯ If you have selected the NDS mode, type the volume of the print queue into the [Queue Volume] box.

Clicking **[Browse]**, you can select one of those shown in the **[Browse]** dialog box.

⓰ Click [Next >].

A dialog box to acknowledge the printing environment appears.

⓱ After acknowledging the environment, click [Next >].

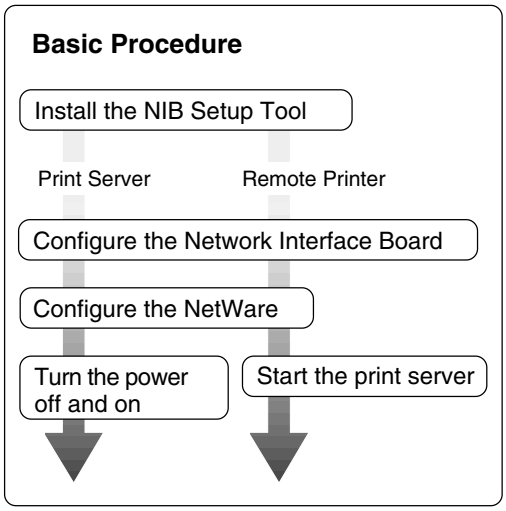
If you want to change the settings, click **[< Back]** and make the settings again.

Clicking **[Next >]**, the NIB Setup Tool automatically creates the Print Server, the Printer, and the Print Queue in the NetWare network.

⓲ After the confirmation dialog box appears, select [Quit] and click [Finish] to exit the NIB Setup Tool.

NetWare 3.x - Advanced Settings

The actual procedures for configuring the machine vary depending on whether the Network Interface Board is configured as a print server or as a remote printer. This section describes how to configure the machine in the NetWare 3.x environment.



Preparation

The following procedures use the Property Sheet method in configuring the Network Interface Board. If you configure the Network Interface Board as a NetWare print server for the first time, we recommend you use the Wizard method. ⇒ P.43 *"Quick Setup Using the NIB Setup Tool Wizard"*

Note

❒ This section assumes NetWare is functional and that the necessary environment for the NetWare Print Service is available.

Setting Up as a Print Server

1 Log on to the file server as a Supervisor or a Supervisor equivalent.

2 Run the NIB Setup Tool.

Reference

⇒ P.42 *"Running the NIB Setup Tool"*

3 Click [Property Sheet] and click [OK].

The **[NIB Setup Tool - Network board list]** dialog box of the Network Interface Board appears.

4 Click [IPX protocol].

5 Click the IPX address of the Network Interface Board which is to be configured, and then click [Next >].

Note

❒ If you do not know which Network Interface Board you are configuring, see the network configuration page to check the MAC address (Network Address).

6 Make sure that the MAC address and IPX address are correct, and click [Finish].

The **[NIB Setup Tool]** window appears.

7 Click [Configure].

The property sheet appears.

8 Click the [General] tab, and type the name of the print server into the [Device Name] box.

9 Click the [NetWare] tab, and make the following settings.

❶ **Select [Bindery].**

❷ **In the [File Server Name:] box, type the name of the file server in which a print server is to be created.**

Click **[Browse]** to select a file server among those listed in the **[Browse]** dialog box.

❸ **Click [OK] to close the property sheet.**

❹ **After the confirmation dialog box appears, click [OK].**

10 On the [NIB] menu, click [Exit] to exit the NIB Setup Tool.

11 Type "PCONSOLE" from the command prompt.

```
F:> PCONSOLE
```

12 Create a print queue as follows:

Note

❒ If you use a currently defined print queue, go to step 13.

❶ **From the [Available Options] menu, select [Print Queue Information] and press the 【ENTER】 key.**

❷ **Press the 【INSERT】 key and type a print queue name.**

❸ **Press the 【ESC】 key to return to the [Available Options] menu.**

⓭ Create a printer as follows:

❶ From the [Available Options] menu, select [Print Server Information] and press the【ENTER】key.

❷ To create a new print server, press the【INSERT】key and type a print server name.

If you use a currently defined print server, select one of the print servers shown in the **[Print Server]** list.

Important

❒ Use the same name as that specified in the NIB Setup Tool. (Step ⑧).

❸ From the [Print Server Information] menu, select [Print Server Configuration].

❹ From the [Print Server Configuration] menu, select [Printer Configuration].

❺ Select the printer which is indicated as "Not Installed".

❻ If you want to change the name of the printer, type a new name.

A name "Printer x" is assigned to the printer. "x" stands for the number of the selected printer.

❼ For type, select [Remote Other/Unkown].

The IRQ, Buffer size, Starting form, and Queue service mode are automatically configured.

❽ Press the【ESC】key, and click [Yes] in the confirmation dialog box.

❾ Press the【ESC】key to return to the [Print Server Configuration] menu.

⓮ Assign print queues to the created printer as follows:

❶ From the [Print Server Configuration] menu, select [Queues Serviced By Printer].

❷ Select the printer created in step ⓭.

❸ Press the【INSERT】key to select a queue serviced by the printer.

Note

❒ You can select more than one queue at a time.

❹ Follow the instructions on the screen to make other necessary settings.

When you have finished the previous steps, make sure that the queues are assigned.

⓯ Press the【ESC】key until "Exit?" appears, and select [Yes] to exit PCONSOLE.

⓰ Turn the printer power off and on.

Note

❒ To make sure that the printer is correctly configured, type the following from the command prompt.

```
F:> USERLIST
```

❒ If the printer works as configured, the name of the print server appears as an attached user.

Setting Up as a Remote Printer

1 Log on to the file server as a Supervisor or a Supervisor equivalent.

2 Run the NIB Setup Tool.

Reference

⇒ P.42 *"Running the NIB Setup Tool"*

3 Click [Property Sheet] and click [OK].

The **[NIB Setup Tool - Network board list]** dialog box of the Network Interface Board appears.

4 Click [IPX protocol].

5 Click the IPX address of the Network Interface Board which is to be configured, and click [Next >].

Note

❒ If you do not know which Network Interface Board you are configuring, see a network configuration page to check the MAC address (Network Address).

6 Make sure that the MAC address and IPX address are correct, and click [Finish].

The **[NIB Setup Tool]** window appears.

7 Click [Configure].

The property sheet appears.

8 Click the [General] tab, and type the name of the print server into the [Device Name] box.

9 Click the [NetWare] tab, and make the following settings.

❶ In the [Print Server Name] box, type the name of the print server.

❷ In the [File Server Name] box, type the name of the file server in which a print server is to be created.

Clicking **[Browse]**, you can select a file server among those listed in the **[Browse]** dialog box.

❸ In the [Print Server Operation Mode] group, click [As Remote Printer].

❹ In the [Remote Printer No.] box, type the printer number.

Important

❒ Use the same printer number as that to be created in the printer server.

❺ Click [OK] to close the property sheet.

❻ After the confirmation dialog box appears, click [OK].

⑩ On the [NIB] menu, click [Exit] to exit the NIB Setup Tool.

⑪ Type "PCONSOLE" from the command prompt.

```
F:> PCONSOLE
```

⑫ Create a print queue as follows:

Note

❒ If you use a currently defined print queue, go to step ⑬.

❶ From the [Available Options] menu, select [Print Queue Information] and press the 【ENTER】 key.

❷ Press the 【INSERT】 key and type a print queue name.

❸ Press the 【ESC】 key to return to the [Available Options] menu.

⑬ Create a printer as follows.

❶ From the [Available Options] menu, select [Print Server Information] and press the 【ENTER】 key.

❷ To create a new print server, press the 【INSERT】 key and type a print server name.

If you use a currently defined print server, select one of the print servers shown in the **[Print Server]** list.

Important

❒ Use the same name as that specified in the NIB Setup Tool. (Step ⑧).

❸ From the [Print Server Information] menu, select [Print Server Configuration].

❹ From the [Print Server Configuration] menu, select [Printer Configuration].

❺ Select the printer which is indicated as "Not Installed".

Important

❒ Use the same number as that specified as Remote Printer No. using the NIB Setup Tool. (Step ⑨-❹).

❻ Type a new name, if you change the name of the printer, .

A name "Printer x" is assigned to the printer. x stands for the number of the selected printer.

❼ Select [Remote Parallel, LPT1,] for type.

The IRQ, Buffer size, Starting form, and Queue service mode are automatically configured.

❽ Press the 【ESC】 key, and click [Yes] in the confirmation dialog box.

❾ Press the 【ESC】 key to return to [Print Server Configuration Menu].

⓮ Assign print queues to the created printer as follows:

❶ From [Print Server Configuration Menu], select [Queues Serviced By Printer].

❷ Select the printer created in step ⓭.

❸ Press the 【INSERT】 key to select a queue serviced by the printer.

Note

❒ You can select more than one queue at a time.

❹ Follow the instructions on the screen to make other necessary settings.

When you have finished the above steps, make sure that the queues are assigned.

⓯ Press the 【ESC】 key until "Exit?" appears, and select [Yes] to exit PCONSOLE.

⓰ Start the print server by typing the following from the console of the NetWare Server.

If it is running, restart it after exiting it.

❖ To exit

```
CAREE: unload pserver
```

❖ To start

```
CAREE: load pserver print_server_name
```

Note

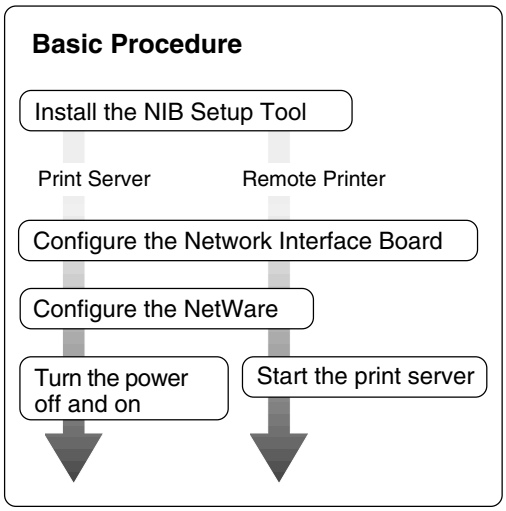
❒ If the printer works as configured, "Waiting for job" appears.

NetWare 4.x, 5 - Advanced Settings

The actual procedures for configuring the machine vary depending on whether the Network Interface Board is configured as a print server or as a remote printer. This section describes how to configure it in the NetWare 4.x, 5 environment.

❖ To use NetWare 5

- You cannot use the NDPS (Novell Distributed Print Services) mode.
- If you use Pure IP, configure the machine to use the TCP/IP protocol. For more information about how to make the settings, see the System Settings.



Preparation

The following procedures use the Property Sheet method in configuring the Network Interface Board. If you configure the Network Interface Board as a NetWare print server for the first time, we recommend you use the Wizard method. ⇒ P.43 *"Quick Setup Using the NIB Setup Tool Wizard"*

Note

❒ This section assumes NetWare is functional and that the necessary environment for the NetWare Print Service is available.

❒ You should install the client software released from Novell in Windows before running the NIB Setup Tool for configuring in NDS mode or using Windows NT 4.0.

Setting Up as a Print Server

Important

❒ You can set up the print server using the NDS or Bindery mode in NetWare 4.x, 5. The following procedure is for setting up the print server using the NDS mode in NetWare 4.1. When you set up the print server using the Bindery mode, use the NIB Setup Tool Wizard. ⇒ P.43 *"Quick Setup Using the NIB Setup Tool Wizard"*.

Note

❒ If you use Pure IP in NetWare 5, follow the procedure on P.55 *"Using Pure IP in the NetWare 5 environment"*.

1 Log on to the file server as an Admin or an Admin equivalent.

2 Run the NIB Setup Tool.

Reference

⇒ P.42 *"Running the NIB Setup Tool"*

3 Click [Property Sheet] and click [OK].

4 Click [IPX protocol].

5 Click the IPX address of the Network Interface Board which is to be configured, and click [Next >].

Note

❒ If you do not know which Network Interface Board you are configuring, see the network configuration page to check the MAC address (Network Address).

6 Make sure that the MAC address and IPX address are correct, and click [Finish].

The **[NIB Setup Tool]** window appears.

7 Click [Configure].

The property sheet appears.

8 Click the [General] tab, and type the name of the print server into the [Device Name] box.

9 Click the [NetWare] tab, and make the following settings.

❶ In the [Print Sever Name:] box, type the name of the print sever.

❷ In the [File Sever Name:] box, type the name of the file sever in which a print server is to be created.

Clicking **[Browse]**, you can select a file server among those listed in the **[Browse]** dialog box.

❸ **In the [NDS Context:] box, type the context in which the print server is to be created.**

Clicking **[Browse]**, you can select a context among those listed in the **[Browse]** dialog box.

As a context, object names are typed from a lower object and divided by a period. For example, if you want to create a print server into NET under DS, type "NET.DS".

❹ **Click [OK] to close the property sheet.**

❺ **After the confirmation dialog box appears, click [OK].**

⑩ **On the [NIB] menu, click [Exit] to exit the NIB Setup Tool.**

⑪ **From Windows, run NWAdmin.**

Reference

For more information about NWAdmin, see the documentation that comes with the NetWare.

⑫ **Create a print queue as follows:**

❶ **Select the container object the print queue is located in among those in the directory tree, and click [Create] on the [Object] menu.**

❷ **In the [Class of new object] box, click "Print Queue", and click [OK].**

❸ **In the [Print Queue name] box, type the name of the print queue.**

❹ **In the [Print Queue volume] box, click the [Browse] button.**

❺ **In the [Available objects] box, click the volume in which the print queue is created, and click [OK].**

❻ **After acknowledging the settings, click [Create].**

⑬ **Create a printer as follows:**

❶ **Select the container object the printer is located in, and click [Create] on the [Object] menu.**

❷ **In the [Class of new object] box, click "Printer", and click [OK]. When you are using NetWare 5, click "Printer (Non NDPS)".**

❸ **In the [Printer name] box, type the name of the printer.**

❹ **Select the [Define additional properties] check box, and click [Create].**

14 **Assign print queues to the created printer as follows:**

❶ **Click [Assignments], and click [Add] in the [Assignments] group.**

❷ **In the [Available objects] box, click the queue created in step 12, and click [OK].**

❸ **Click [Configuration], and in the [Printer type] box, select [Parallel] using the drop-down menu, and then click [Communication].**

❹ **Click [Manual load] in the [Communication type] group, and click [OK].**

❺ **After acknowledging the settings, click [OK].**

15 **Create a print server as follows:**

❶ **Select the context specified using the NIB Setup Tool (step 9-❶), and on the [Object] menu, click [Create].**

❷ **In the [Class of new object] box, click "Print Server", and click [OK]. When you are using NetWare 5, click "Print Server (Non NDPS)".**

❸ **In the [Print Server name] box, type the name of the print server.**

Important

❒ Use the same name as that specified using the NIB Setup Tool. (Step 8)

❹ **Select the [Define additional properties] check box, and click [Create].**

16 **Assign the printer to the created print server as follows.**

❶ **Click [Assignments], and click [Add] in the [Assignments] group.**

❷ **In the [Available objects] box, click the printer created in step 13, and click [OK].**

❸ **After acknowledging the settings, click [OK].**

17 **Turn the printer power off and on.**

Note

❒ If the printer works as configured, the name of the print server appears as an attached user.

Using Pure IP in the NetWare 5 environment

1 **Log on to the file server as an Admin or an Admin equivalent.**

2 **Run the NIB Setup Tool.**

Reference

⇒ P.42 *"Running the NIB Setup Tool"*

3 **Click [Property Sheet] and click [OK].**

The **[Network board list]** dialog box appears.

4 **Click [TCP/IP protocol].**

5 **Click the IP address of the Network Interface Board which is to be configured, and click [Next >].**

Note

❒ If you do not know which Network Interface Board you are configuring, see the network configuration page to check the MAC address (Network Address).

6 **Make sure that the MAC address and IP address are correct, and click [Finish].**

The **[NIB Setup Tool]** window appears.

7 **Click [Configure].**

The property sheet appears.

8 **Click the [General] tab, and type the name of the print server into the [Device Name:] box.**

9 **Click the [NetWare] tab, and make the following settings.**

❶ **In the [Print Server Name:] box, type the name of the print server.**

❷ **In the [File Server Name:] box, type the name of the file server in which a print server is to be created.**

Clicking **[Browse]**, you can select a file server among those listed in the **[Browse File Server]** dialog box.

❸ **In the [NDS Context:] box, type the context of the print server.**

Clicking **[Browse]**, you can select an NDS tree and an NDS context among those listed in the **[Browse Context]** dialog box.

As a context, object names are typed from a lower object and divided by a period. For example, if you want to create a print server into NET under DS, type "NET.DS".

❹ **In the [Print Server Operation Mode] group, click [As Print Server].**

❺ **Click [OK] to close the property sheet.**

❻ **After the confirmation dialog box appears, click [OK].**

10 **On the [NIB] menu, click [Exit] to exit the NIB Setup Tool.**

After this step, go to step **11** on P.53 *"Setting Up as a Print Server"*.

Setting Up as a Remote Printer

1 Log on to the file server as an Admin or an Admin equivalent.

2 Run the NIB Setup Tool.

Reference

⇒ P.42 *"Running the NIB Setup Tool"*

3 Click [Property Sheet] and click [OK].

The **[NIB Setup Tool - Network board list]** dialog box of the Network Interface Board appears.

4 Click [IPX protocol].

5 Click the IPX address of the Network Interface Board which is to be configured, and click [Next >].

Note

❒ If you do not know which Network Interface Board you are configuring, see the network configuration page to check the MAC address (Network Address).

6 Make sure that the MAC address and IPX address are correct, and click [Finish].

The **[NIB Setup Tool]** window appears.

7 Click [Configure].

The property sheet appears.

8 Click the [General] tab, and type the name of the print server into the [Device Name] box.

9 Click the [NetWare] tab, and make the following settings.

❶ In the [Print Server Name:] box, type the name of the print server.

❷ In the [File Server Name:] box, type the name of the file server in which a print server is to be created.

Clicking **[Browse]**, you can select a file server among those listed in the **[Browse]** dialog box.

❸ **In the [NDS Context:] box, type the context in which the print server is to be created.**

Clicking **[Browse]**, you can select a context among those listed in the **[Browse]** dialog box.

As a context, object names are typed from a lower level object and divided by a period. For example, if you want to create a print server into NET under DS, type "NET.DS".

❹ **In the [Print Server Operation Mode] group, click [As Remote Printer].**

❺ **In the [Remote Printer No.] box, type the number of the printer.**

Important

❒ Use the same number as that of the printer to be created in the print server.

❻ **Click [OK] to close the property sheet.**

❼ **After the confirmation dialog box appears, click [OK].**

⑩ **On the [NIB] menu, click [Exit] to exit the NIB Setup Tool.**

⑪ **From Windows, run NWAdmin.**

Reference

For more information about NWAdmin, see the documentation that comes with the NetWare.

⑫ **Create a print queue as follows:**

❶ **Select the container object the print queue is located in among those in the directory tree, and click [Create] on the [Object] menu.**

❷ **In the [Class of new object] box, click "Print Queue", and click [OK].**

❸ **In the [Print Queue name] box, type the name of the print queue.**

❹ **In the [Print Queue Volume] box, click [Browse] button.**

❺ **In the [Available objects] box, click the volume in which the print queue is created, and click [OK].**

❻ **After acknowledging the settings, click [Create].**

⓭ Create a printer as follows:

❶ Select the container object the printer is located in, and click [Create] in the [Object] menu.

❷ In the [Class of new object] box, click "Printer", and click [OK]. When you are using NetWare 5, click "Printer (Non NDPS)".

❸ In the [Printer name] box, type the name of the printer.

❹ Select the [Define additional properties] check box, and click [Create].

⓮ Assign print queues to the created printer as follows:

❶ Click [Assignments], and click [Add] in the [Assignments] group.

❷ In the [Available objects] box, click the queue created in step ⓬, and click [OK].

❸ Click [Configuration], and in the [Printer type] box, select [Parallel] using the drop-down menu, and then click [Communication].

❹ Click [Manual load] in the [Communication type] group, and click [OK].

❺ After acknowledging the settings, click [OK].

⓯ Create a print server as follows:

❶ Select the context specified using the NIB Setup Tool (Step ⑨-❶), and on the [Object] menu, click [Create].

❷ In the [Class of new object] box, click "Print Server", and click [OK]. When you are using NetWare 5, click "Print Server (Non NDPS)".

❸ In the [Print Server name] box, type the name of the print server.

Important

❒ Use the same name as that specified using the NIB Setup Tool. (Step ⑧).

❹ Select the [Define additional properties] check box, and click [Create].

⓰ Assign the printer to the created print server as follows.

❶ Click [Assignments], and click [Add] in the [Assignments] group.

❷ In the [Available objects] box, click the queue created in the step ⓭, and click [OK].

❸ In the [Printers] group, click the printer assigned in step ❷ , and click [Printer Number].

❹ Type the printer number and click [OK].

Important

❒ Use the same number as that specified as Remote Printer No. using the NIB Setup Tool. (Step ⑨-❺).

❺ After acknowledging the settings, click [OK].

17 Start the print server by typing the following from the console of the NetWare Server.

If it is running, restart it after exiting it.

❖ **To exit**

```
CAREE: unload pserver
```

❖ **To start**

```
CAREE: load pserver print_server_name
```

Setting Up a Client Computer

This section describes how to set up a client computer when using a NetWare print server.

Note

❒ This section assumes that the client has NetWare client applications installed and is correctly configured to communicate with a NetWare print server. If not, install the necessary applications before starting the setting up procedure.

Windows 95/98/Me

Follow the procedure to set up a Windows 95/98/Me client.

Preparation

Log on to the NetWare file server before starting the following procedure.

1 Install the printer driver you want to use as "Local printer".

Reference

For more information about installing the printer driver, see the Printer Unit Type 1045 Printer Reference 1.

Note

❒ Any port can be selected during the installation, however, LPT1 is recommended.

2 Click [Start], point to [Settings], and then click [Printers].

3 In the [Printers] window, click the icon of the printer you want to use.

4 On the [File] menu, click [Properties].

5 Click the [Details] tab, and click [Add Port].

6 Click [Network] and click [Browse].

7 On the network tree, double-click the name of the file server.

The queues are displayed.

8 Click the queue you want to print, and click [OK].

9 Click [OK].

In the **[Print to the following port]** box, a network path to the printer appears.

10 Click [OK] to close the Printer Properties, and again, open it.

11 **Click the [Printer Settings] tab.**

12 **Select to clear the [Form feed] and [Enable banner] check boxes.**

Note

❒ You should not select these boxes because they should be specified using the printer driver. If they are selected, the printer might not print correctly.

When using the PostScript printer driver

Follow these steps to set up for the PostScript printer driver.

❶ **Click the [PostScript] tab.**

❷ **Click [Advanced].**

❸ **Click to clear the [Send CTRL+D before job] and [Send CTRL+D after job] check boxes.**

13 **Click [OK] to close the Printer Properties.**

Windows 2000

Follow the procedure to set up a Windows 2000 client.

Preparation

Log on to the NetWare file server before starting the following procedure.

1 **Double-click the [My Network Places] icon on the desktop and navigate to the queue you want to use, and then double-click it.**

The printers dialog box appears.

2 **Click [No].**

3 **Close all the applications that are currently running.**

4 **Insert the CD-ROM labeled "Printer Drivers and Utilities" into the CD-ROM drive.**

If the setup menu starts automatically, you can go to the next step. If not, see the Printer Unit Type 1045 Printer Reference 1.

5 **The [Printer Installation] dialog box appears.**

6 **From the [Port] list, select the queue you selected in step 1, and click [Next >].**

7 **Follow the instructions on the screen to complete the installation of the printer driver.**

Windows NT 4.0

Follow the procedure to set up a Windows NT 4.0 client.

Preparation

Log on to the NetWare file server before starting the following procedure.

1. **Double-click the [Network Neighborhood] icon on the desktop and navigate to the queue you want to use, and then double-click it.**

   The **[Printers]** dialog box appears.

2. **Click [No].**

3. **Close all the applications that are currently running.**

4. **Insert the CD-ROM labeled "Printer Drivers and Utilities"into the CD-ROM drive.**

   If the setup menu starts automatically, you can go to the next step. If not, see the Printer Unit Type 1045 Printer Reference 1.

5. **The [Printer Installation] dialog box appears.**

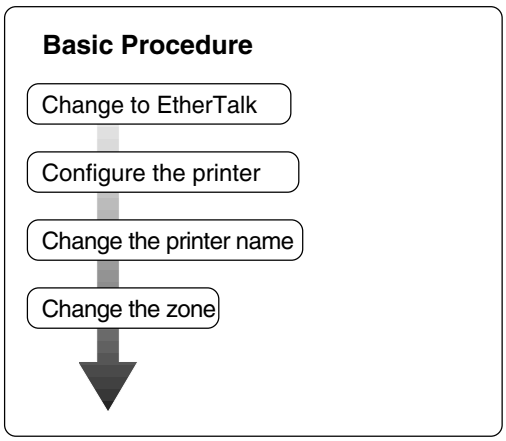
6. **From the [Port] list, select the queue you selected in step 1, and click [Next >].**

7. **Follow the instructions on the screen to complete the installation of the printer driver.**

5. Macintosh Configuration

Configuring Macintosh

This section describes how to configure a Macintosh computer to use EtherTalk. The actual procedures to configure a Macintosh may vary depending on the version of the Mac OS. The following procedure describes how to configure Mac OS 9. If you are not using Mac OS 9, see the manual that comes with your version of Mac OS for more information.



Limitation

❒ Use PostScript 3, to print from a Macintosh.

Changing to EtherTalk

The following procedure is for configuring a Macintosh computer to use EtherTalk.

Reference

For more information about installing the software required for EtherTalk, see the Macintosh manuals.

1 Open [Control Panel], and double-click the [AppleTalk] icon.

2 From the [Connect via:] pop-up menu, select "Ethernet".

3 If you change zones, select a name from the [Current zone:] pop-up menu.

4 Close the [AppleTalk] control panels.

5 Restart the Macintosh.

Configuring the Printer

Use the control panel to activate the EtherTalk protocol. (The default is active.)

Reference

For more information about configuration, see the System Settings.

Changing the Printer Name

If the network has several similar model printers, the names will be the same. Printers that have the same name will have their names slightly changed in the Chooser. For example, three printers named "printer" will appear in the chooser as "printer0", "printer1" and "printer2".

To change the printer name in the Macintosh EtherTalk environment, use the Printer Utility for Mac included on the CD-ROM labeled "Printer Drivers and Utilities".

Changing the Zone

To change the zone configuration in the Macintosh EtherTalk environment, use the Printer Utility for Mac included on the CD-ROM labeled "Printer Drivers and Utilities".

Reference

For more information about using Printer Utilities for Mac, see PostScript 3 Unit Type 1045 Operating Instructions Supplement provided as a PDF file on the CD-ROM labeled "Operating Instructions for Printer".

Configuring the Network Interface Board with a Web Browser

The Network Interface Board functions as a Web server in addition to allowing a printer to function as a network printer. You can use a Web Browser to view the printer status and configure the Network Interface Board.

❖ Configuring the machine

This requires the TCP/IP protocol to be installed. After the machine has been configured to use the TCP/IP protocol, it will be possible to adjust the settings using a Web Browser.

Reference

For more information about configuring the machine to use the TCP/IP protocol, see the System Settings.

❖ Operating system browser requirements

OS	Browser
Windows 95/98/Me	Microsoft Internet Explorer 3.02/4.0/5.0 Netscape Navigator 3.0/4.0
Windows NT 4.0	
Windows 2000	
Mac OS 7.6.1 ~ 9.0.4	
Solaris 2.5 ~ 2.7	

Limitation

- ❒ Sometimes after clicking **[Back]** , the previous page may not appear. In this case, click **[Refresh]** or **[Reload]** .
- ❒ The text on the screen may disappear or be aligned incorrectly if the font size settings of the browser are too large. It is recommended that you use a font size equal to or smaller than “10 point” with Netscape Navigator, and “Medium” or smaller with Internet Explorer.

Going to the Top Page

After launching the Web Browser, type the IP address of the machine. See the example below. This example is for the English version.

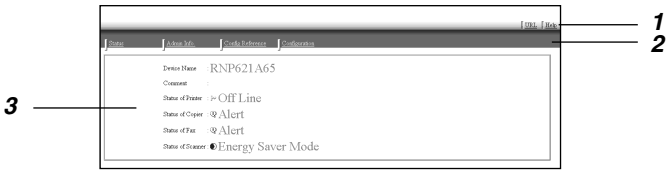
`http://192.168.15.16/`

(In this example, the IP address of the Network Interface Board is 192.168.15.16.)

Note

❒ If a DNS server is used on the network, you can type the host name as a URL. For example, http://webmonitor.netprinter.com/. In order to do this, you must the register the IP address and the host name of the Network Interface Board with the DNS server. Consult the network administrator for information about how to do this.

❒ If the network uses proxy servers, the browser may run slowly.



1. Header Buttons

You can register favorite URLs with **[URL]**. To view the Help section, click **[Help]**.

Important

❒ When connecting via a dial-up connection, please be aware that there will be a communication charge as you are logging onto the Internet.

Note

❒ The Help files are stored on the CD-ROM labeled "Operating Instructions for Printer" in HTML format.

2. Menu Buttons

These Buttons are to configure the Network Interface Board and for checking the status of the machine.

Note

❒ When you click **[Configuration]**, a dialog box appears requesting the user name and password. Type only the password in this dialog box. The default password is "password".

❒ The password is the same as that used for remote maintenance and that used in the NIB Setup Tool. If you change a password with the Web Browser, the other passwords are also changed.

3. Status

Displays the name and comments of the Network Interface Board, and the printer status.

Linking the address (URL) to the [Help] button

You can link the address (URL) of the **[Help]** button to the Help files on the computer or on a Web server.

① Copy the Help files on the CD-ROM to the desired location. The Help files are located in folders labeled with abbreviated language names; for example, English Help files are in the **[EN]** folder. Make sure to copy the entire **[EN]** folder to the new location.

② Using a Web Browser, navigate to the Top Page and click **[Network config]**.

③ Type your password, (it is not necessary to type a user name) and click **[OK]**.

④ Type the path to the Help files in the **[Help URL]** box.
If you copied the Help files to "C:\HELP\EN", type "file ://C:/HELP/". For example if you copied the files to a web server and the index URL is "http://a.b.c.d/HELP/EN/index.html", type "http://a.b.c.d/HELP/".

⑤ Click **[Apply]**.
When a warning message appears, select to continue configuration.

Remote Maintenance by telnet

You can view the printer status and configure the Network Interface Board using telnet.

Note

❒ You should specify a password so that only the network administrator, or a person having network administrator privileges, can use remote maintenance.

Using telnet

The following is a sample procedure using telnet.

Limitation

❒ Only one person at a time can be logged on to do remote maintenance.

1 **Using the IP address or host name of the machine, start telnet.**

```
% telnet IP_address
```

Note

❒ In order to use the host name instead of the IP address, you must write it to the /etc/hosts file.

2 **Type the password.**

Note

❒ The default is “password”.

3 **Type a command.**

Reference

For more information about telnet commands, see P.71 *“Commands List”*.

4 **Exit telnet.**

```
msh> logout
```

When the configuration is changed, a message requests whether or not the changes should be saved.

5 **Type “yes” to save the changes, and press the【ENTER】key.**

If you do not want to save the changes, type “no”and press the【ENTER】key. If you want to make additional changes, type “return” at the command line, and press the【ENTER】key.

Note

❒ If the "Cannot write NVRAM information" message appears, the changes are not saved. Repeat the steps above.

❒ The Network Interface Board is reset automatically when the settings are changed.

❒ When the Network Interface Board is reset, the active print job which has already been sent to the machine will finish printing. However, jobs that have not been sent yet will be canceled.

Commands List

This is a list of commands that can be used via remote maintenance.

Note

❒ Type "help" to see a list of commands that can be used.

```
msh> help
```

❒ Type "help command_name" to display information about the syntax of that command.

```
msh> help command_name
```


TCP/IP address

Use the ifconfig command to configure TCP/IP(IP address, subnet mask, broadcast address, default gateway address) for the machine.

❖ **Reference**

```
msh> ifconfig
```

❖ **Configuration**

```
msh> ifconfig naf0 parameter address
```

Parameter	Meaning
(no parameter)	IP address
netmask	subnet mask
gateway	default gateway address
broadcast	broadcast address

The following is an example for configuring an IP address of 192.168.15.16.

```
msh> ifconfig naf0 192.168.15.16
```

The following is an example for configuring a subnet mask of 255.255.255.0.

```
msh> ifconfig naf0 netmask 255.255.255.0
```

Note

❒ This affects the configuration of the Network Interface Board of the IP address that is used.

❒ To type an address using hexadecimal, prefix it by "0x".

Address

❖ **Subnet Mask**

A number used to mathematically "mask" or hide the IP address on the network by eliminating those parts of the address that are alike for all the machines on the network.

❖ **Default Gateway Address**

A gateway is a connection or interchange point that connects two networks. A gateway address is used as a gateway by the router or host computer .

Note

❒ To get the above addresses, contact your network administrator.

Access Control

Use the access command to view and configure access control.

❖ **Reference**

```
msh> access
```

❖ **Configuration**

```
msh> access parameter address
```

Parameter	Meaning
control	Access Control Address
mask	Access Control Mask

Note

❒ The Access Control Address and the Access Control Mask are used to limit access to the computer used for printing by denying access to users based on their IP address. If it is not necessary to limit access, set the Access Control Mask to "0.0.0.0".

❒ When the Access Control Address matches the masked result of the IP address computer attempting to print, print jobs from that IP address will be accepted by the Network Interface Board.

❒ For example, if you assign 192.168.15.16 as the Access Control Address of the Network Interface Board, the IP addresses that can print are as follows: XXX means any number from 1 to 254 is acceptable.

Access Control Mask	IP addresses that can access the printer
0. 0. 0. 0	XXX.XXX.XXX.XXX
255. 0. 0. 0	192.XXX.XXX.XXX
255.255. 0. 0	192.168.XXX.XXX
255.255.255. 0	192.168. 15.XXX
255.255.255.255	192.168. 15. 16

Network Boot

Use the set command to configure the boot method.

msh> set *parameter* {on | off}

"on" means active and "off" means inactive.

Parameter	Meaning
dhcp	DHCP (Dynamic Host Configuration Protocol)

Note

❒ When you use DHCP, the server also needs to be configured.

❒ DHCP takes precedence over all other settings.

Protocol

Use the set command to allow/prevent remote access for each protocol.

msh> set *protocol* {up | down}

Protocol	
appletalk tcpip netware netbeui lpr ftp rsh diprint web snmp ipp	"up" means active and "down" means inactive.

Note

❒ If you prohibit remote access using TCP/IP and then log out, you cannot use remote access. If this was a mistake, you can use the control panel to allow access by TCP/IP.

❒ When you prevent access via TCP/IP, you are also prevented from using lpr, ftp, rsh, diprint, web, snmp and ipp.

Printer status

The following commands can be used to get information about the current status of the printer.

msh> *command*

Command	Information that is displayed
status	Status of printer. Information about the print jobs.
info	Information about the paper tray, output tray, printer language of printer.
prnlog [ID]	Lists the last 16 print jobs.

Note

❒ More information about any print job is displayed when the ID number is added after the prnlog command.

Reference

For more information about the meaning of the data returned with these commands, see P.82 *"Configuring the Network Interface Board"*.

Network Interface Board configuration settings information

Use the show command to display the Network Interface Board configuration settings.

msh> show [-p]

Note

❒ Add "-p" to the show command to have the information displayed one screen at a time.

Reference

For more information about the meaning of the data returned with this command, see P.82 *"Configuring the Network Interface Board"*.

System log information

Use the syslog command to display information stored in the machine's system log.

```
msh> syslog
```

Reference

For more information about the displayed information, see P.84 *"System Log Information"*.

SNMP

Use the snmp command to display and edit SNMP configuration settings such as the community name.

Note

❒ You can configure from ten SNMP access settings numbered 1–10.

❒ Default access settings 1 and 2 are as follows.

Number	1	2
Community name	public	admin
IP address	0.0.0.0	0.0.0.0
Access type	read-only trap off	read-write trap off

❖ Display

Shows the SNMP information and available protocols.

```
msh> snmp ?
msh> snmp [-p] [registered_number]
```

Note

❒ If the -p option is added, you can view the settings one by one.

❒ Omitting the number displays all access settings.

❖ Community name configuration

You can set the community name of the registered number.

```
msh> snmp number name community_name
```

Note

❒ The community name must consist of 15 characters or less.

❖ Access type configuration

You can select the access type from those listed below.

msh> snmp *number* type *access_type*

Access type	Type of access which is permitted
read	Read only
write	Read and write
trap	User is notified of trap messages.
no	All access is denied.

❖ Protocol configuration

You should use the following command to set the protocols to active or inactive. If you set a protocol to inactive, all access settings set to use that protocol will be disabled.

msh> snmp {ip | ipx} {on | off}

- "on" means active and "off" means inactive

To change the protocol of an access settings, use the following command. However, if you disabled a protocol with the above command, making it active here will have no effect.

msh> snmp *number* active {ip | ipx} {on | off}

❖ Access configuration

You can configure the address of a host depending on the protocols used.
The Network Interface Board accepts requests only from hosts having addresses with access types of "read-only" or "read-write". Type "0" to have the Network Interface Board accept requests from any host without requiring a specific type of access.
Command syntax:

msh> snmp *number* {ip | ipx} *address*

Note

❒ To specify the TCP/IP protocol, type ip followed by a space, and then the IP address.

❒ To specify the IPX/SPX protocol, type ipx followed by a space, and then the IPX address followed by a decimal, and then the MAC address of the Network Interface Board.

The following is an example of how to configure registration number 3 with the IP address 192.168.15.16.

msh> snmp 3 ip 192.168.15.16

The following is an example of how to configure registration number 3 with the IPX address 7390A448, and the MAC address 00:00:74:62:5C:65.

msh> snmp 3 ipx 7390A448:000074625C65

IPP

Use the ipp command to configure the IPP settings.

❖ Viewing setting

The following command displays the current IPP settings.

```
msh >ipp
```

Example output:

```
timeout=900(sec)
auth basic
```

- The "timeout" setting specifies how many seconds the computer keeps trying to access the network printer to send print jobs when no connection can be made.
- The "auth" setting indicates the user authorization mode.

❖ IPP timeout configuration

Specify how many seconds to wait before canceling a print job if it has been interrupted for some reason. The range of time can be changed between 30 to 65535 seconds.

```
msh>ipp timeout {30 - 65535}
```

❖ IPP user authorization configuration

Use the IPP user authorization to restrict users that can print with IPP. The default is "off" .

```
ipp auth {basic|digest|off}
```

- "basic" and "digest" are user authorization setting.
- "off" removes the user's authorization.

Note

❒ If you select "basic" or "digest", see next section "Entry the IPP User Authorization" for how to configure the user name. Up to ten user names are available.

❖ Configuring the IPP user authorization

Use the following command:

```
ipp user
```

The following message appears.

```
Input user number (1 to 10):
```

Type the number, user name and password.

```
IPP user name:user1
IPP password:*******
```

After configuring the settings, the following message appears.

```
User configuration changed.
```

SMB

Use the smb command to configure or delete the computer name or workgroup name for NetBEUI.

msh >smb *parameter*

Parameter	Settings
smb comp	Your computer name consisting of up to 13 characters
smb group	Workgroup name consisting of up to 15 characters
smb comment	Comment consisting of up to 31 characters
smb clear comp	Clears the computer name
smb clear group	Clears the Workgroup name
smb clear comment	Clears comment

ROUTE

Use the route command to control the routing table.

This command allows you to configure and display routing information. You can change the network configuration from remote PCs using this command.

Note

❒ The maximum number of routing tables are 16.

Parameter	Topics of setting
route add {host | net} destination *1 gateway *1	Adds a host/network route to "destination", and a gateway address to "gateway" in the table. Host becomes the default setting.
route delete {host | net} destination *1	Deletes a host/network route from the table. Host becomes the default setting.
route get {destination *1 }	Displays only route information corresponding to a specified destination. When the destination is unspecified, all routing information is displayed.
route active {host | net} destination *1 on/off	You can turn the specified destination on or off. Host becomes the default setting.
route flush	Deletes all routing information.

*1 IP address

SLP

Use this command to configure SLP settings.

You can search the NetWare server using SLP in the PureIP environment of NetWare5. To use the slp command, you can configure the value of TTL which can be used by the SLP multi-cast-packet.

Note

❒ The default value of TTL is "1". A search is executed only within a local segment. If the router does not support multi-cast, the settings are not available even if the TTL value is increased.

❒ The acceptable TTL value is 1 - 255.

```
msh> slp ttl {1 - 255}
```

Changing the password

Use the passwd command to change the remote maintenance password.

Important

❒ Be sure not to forget or lose the password.

Note

❒ The default password is "password".

1 **Type "passwd".**

```
msh> passwd
```

2 **Type the current password.**

```
Old password:
```

3 **Type the new password.**

```
New password:
```

Note

❒ The password must consist of 3 to 8 alphanumeric characters and symbols. Upper and lower case characters are considered unique. For example, R is different from r.

❒ The password is the same as that used in the configuration of the Network Interface Board using a Web Browser and that used in the NIB Setup Tool. If you change a password from telnet, the other passwords are also changed.

4 **Type the new password once again.**

```
Retype new password:
```

SNMP

The Network Interface Board functions as an SNMP (Simple Network Management Protocol) agent using the UDP and IPX protocols. Using the SNMP manager you can get information about the printer.

The default community names are “public” and “admin”. You can get MIB information using these community names.

Reference

For more information about configuring the community name, see P.75 *“SNMP”* in *“Remote Maintenance by telnet”*.

Limitation

❒ The kinds of supported MIBs vary depending on the printer.

❖ Supported MIBs

- MIB-II
- PrinterMIB
- HostResourceMIB
- RicohPrivateMIB

Understanding the Displayed Information

This section describes how to read the status information returned by the Network Interface Board.

Print Job Information

The status of the print job can be viewed using the following commands.

- telnet : Use the status command. ⇒ P.74 *"Printer status"*

Item name	Meaning
Rank	Print job status. • Active Printing or preparing for printing. • Waiting Waiting to be transferred to the printer.
Owner	Print request user name.
Job	Print request number.
Files	The name of the document.
Total Size	The size of the data (spooled). The default is "0 bytes".

Print Log Information

This is a record of the most recent 16 jobs that have been printed.

This log can be displayed with the following commands.

- telnet : Use the prnlog command. ⇒ P.74 *"Printer status"*

Name	Meaning
ID	Print request ID.
User	Print request user name.
Page	The number of pages that is printed.
Bytes	The number of bytes that is received.
Result	The result of the print request.
Time	The time when the print request was received
User ID	User ID that is to be configured in the printer driver.
JobName	The name of the document for printing.

Configuring the Network Interface Board

The Network Interface Board settings can be displayed by using the commands below.

- telnet : Use the show command. ⇒ P.74 *"Network Interface Board configuration settings information"*

Item name	Meaning
Common	
Mode	
Protocol Up/Down	Up means active, Down means inactive.
AppleTalk	
TCP/IP	
NetWare	
NetBEUI	
Ethernet interface	
NVRAM version	Internal version number.
Device name	
Comment	
Location	
Contact	
Soft switch	
AppleTalk	
Mode	AppleTalk protocol in selection.
Net	Network number.
Object	Macintosh printer name.
Type	The type of printer.
Zone	Name of the zone that the printer belongs to.

Item name	Meaning
TCP/IP	
Mode	Up means active, Down means inactive.
ftp	
lpr	
rsh	
diprint	
web	
telnet	
snmp	
ipp	
EncapType	Frame type.
Network boot	Network boot.
Address	IP address.
Netmask	Subnet mask.
Broadcast	Broadcast address.
Gateway	Default gateway address.
AccessCtrl	Access control address.
AccessMask	Access control mask.
Time server	
Home page URL	URL of homepage.
Home page link name	URL name of homepage.
Help page URL	URL of help page.
SNMP protocol	Protocol used with SNMP.
NetWare	
EncapType	Frame type.
RPRINTER number	Remote printer number.
Print server name	Print server name.
File server name	Name of the connect file server.
Context name	Context of print server.
Switch	
Mode	Active mode.
NDS/Bindery	(this value is fixed)
Packet negotiation	
Print job timeout	Time of the job timeout.
NetBEUI	
Switch	
Mode	(this value is fixed)
diprint	(this value is fixed)
Notification	Notification of print job completion.
Workgroup name	Name of the workgroup.
Computer name	Name of the computer.
Comment	Comment.
Share name[1]	Share name (name of the printer type).
Shell mode	Mode of the remote maintenance tool.

Message List

This is a list of messages written to the machine's system log. The system log can be viewed using the syslog command.

System Log Information

You can use the following methods to view the system log.

- UNIX : Use the syslog paremeter of rsh, rcp or ftp command. ⇒ *"Printer Status"* in the UNIX Supplement provided as a PDF file included on the CD-ROM labeled "Operating Instructions for Printer".
- telnet : Use the syslog command. ⇒ P.75 *"System log information"*

Message	Description and Solutions
Access to NetWare server <file server name> denied. Either there is no account for this print server on the NetWare server or the password was incorrect.	(In print server mode) Cannot log in to the file server. Make sure that the print server is resistered on the file server. If a password is specified for the print server, delete it.
add_sess: community<community name> already defined.	The same community name already exists. Use another community name.
add_sess: session<community name> not defined.	A requested community name is not defined.
add_sess: bad trap addr:<IpAddress>, community:<community name>	The IP address (0.0.0.0.) is unavailable when the community access type is TRAP. Specify the host IP address for the TRAP destination.
add_sess_ipx: bad trap addr: <IPX address>, community:<community name>	The IPX address (00:00:00:00:00:00) is unavailable when the community access type is TRAP. Specify the host IPX address for the TRAP destination.
add_sess_ipx: community <community name> already defined.	The same community name already exists. Use another community name.
add_sess_ipx: session_ipx<community name> not defined.	A requested community name is not defined.
ANONYMOUS FTP LOGIN FROM <IP address>, <password>	An anonymous login has been made with a password <password> from the host <IP address>.
anpd start. (AppleTalk)	An anpd (AppleTalk Network Package Daemon) has started.
Attach FileServer =<file server name>	Attached to the file server as a nearest server.
Attach to print queue <print queue name>	(In print server mode) Attached to the print queue name.

Message	Description and Solutions
Cannot create service connection	(In remote printer mode) Cannot establish a connection with the file server. The number of file server users may exceed the maximum number that the file server can handle.
Cannot find rprinter (<print server name>/ <printer number>)	The printer having the number displayed on the print server does not exist. Make sure that the number of the printer is registered in the print server.
Change IP address from DHCP Server.	The IP address changes when DHCP LEASE is renewed. To always assign the same IP address, set a static IP address to the DHCP server.
child process exec error! (process name)	Failed to start the network service. Turn the printer off and then on. If this does not work, contact your service or sales representatives.
Connected DHCP Server(<DHCP server address>).	The IP address was successfully received from the DHCP server.
connection from <IP address>	Logged on from the host <IP address>.
Could not attach to FileServer<error number>	(In remote printer mode) Cannot attach to the file server. For some reason, the file server refuses the connection. Check the file server configuration.
Could not attach to PServer<print server>	(In remote printer mode) Cannot attach to the print server. For some reason, the print server refuses the connection. Check the print server configuration.
Current Interface Speed:xxxMbps	The speed of the network (10 Mbps or 100 Mbps).
Current IP address <current IP address>	The IP address <current IP address> was received from the DHCP server.
Current IPX address<IPX address>	The current IPX address.
DHCP lease time expired.	DHCP lease time has expired. The printer tries to discover the DHCP server again. The IP address used up to now becomes invalid.
DHCP server not found.	The DHCP server cannot be found. Make sure the DHCP server is running on the network.
dhcpcd start.	A dhcpcd (DHCP client service) has started.
diprintd started	Direct print service has started.
Duplicate IP=<IP address>(from <MAC address>).	The same IP address is used. An IP address must be unique. Check the address of the device indicated in <MAC address>.

Message	Description and Solutions
Established SPX Connection with PServer,(RPSocket=<socket number>, connID=<connection ID>)	(In remote printer mode) A connection with the print server has been established.
Exit pserver	(In print server mode) Exits the print server because the necessary print server settings have not been made.
Frametype =<frame type name>	The <frame type name> is configured to be used on NetWare.
httpd start.	An httpd has started.
inetd start.	An inetd has started.
ipp disable.	Printing with ipp is disabled.
ipp enable.	Printing with ipp is enabled.
LeaseTime=<lease time>(sec), RenewTime=<renew time>(sec).	The resource lease time that was received from the DHCP server is <lease time> in seconds. The renewal time is also <renew time> in seconds.
Login to fileserver <file server name> (<NDS | BINDERY>)	(In print server mode) Logged in to the file server with NDS or BINDERY mode.
multid start.	Data transmission service for multiprotocols has started.
nbstart start. (NetBEUI)	The service for NetBEUI protocol stack setting has started.
NBT Registration Broadcast(<NetBIOS name>)	Use a local broadcast to map <NetBIOS name> with the IP address.
nbtd start.	A nbtd (NetBIOS over TCP/IP Daemon) has started. (Available only in DHCP mode)
NetBEUI Computer Name =<computer name>	The NetBEUI Computer Name is defined as <computer name>.
nmsd start. (NetBEUI)	A nmsd (Name Server Daemon) has started.
npriter start. (NetWare)	(In remote printer mode) NetWare service has started.
nwstart start. (NetWare)	The service for NetWare protocol stack setting has started.
Open log file <file name>	(In print server mode) The specified log file has been opened.
papd start.	AppleTalk print service has started.
phy release file open failed.	Replacing the Network Interface Board is required. Contact your sales or service representatives.

Message	Description and Solutions
Print queue <print queue name> cannot be serviced by printer 0, <print server name>	(In print server mode) The print queue name cannot be serviced. Make sure that print queue volume exists on the specified file server.
Print server <print server name> has no printer.	(In print server mode) The printer object is not assigned to the print server <print server name>. Using NWAdmin, assign the printer object, and then restart the printer device.
Print session full	Cannot accept the print session.
Printer <printer name> has no queue	(In print server mode) The print queue is not assigned to the printer. Using NWAdmin, assign the print queue to the printer, and then restart it.
pserver start. (NetWare)	(In print server mode) NetWare service has started.
Required computer name (<Computer name>) is duplicated name	The same computer name is detected on the network. The start job determines the computer name by adding the computer name to the suffix (0,1....). Configure a new computer name that is unique.
Required file server (<file server name>) not found	Cannot find the required file server.
restarted.	LPD has started.
sap enable, saptype=<SAP type>, sapname=<SAP name>	The SAP function has started. The SAP (SAP type and SAP name) packet is issued to advertise the service on the SAP table on the NetWare server.
Set context to <NDS context name>	A <NDS context name> has been set.
shutdown signal received. network service rebooting...	Rebooting the network service.
smbd start. (NetBEUI)	An smbd (SMB (Server Message Block) service) has started.
Snmp over ip is ready.	Communication over TCP/IP with SNMP is available.
Snmp over ipx is ready.	Communication over IPX with SNMP is available.
snmpd start.	SNMP service has started.
The print server received error <error number> during attempt to log in to the network.Access to the network was denied.Verify that the print server name and password are correct.	Cannot log in to the file server. The print server is not registered or the password is specified. Register the print server without specifying a password.

Precautions

Please pay attention to the following when using the Network Interface Board. When configuration is necessary, follow the appropriate procedures below.

Connecting a Dial-Up Router to a Network

When the NetWare file server and the printer are on the opposite side of a router, packets are continuously sent back and forth, possibly causing communications charges to increase. Because the packet transmission is a specification of NetWare, you need to change the configuration of the router. If the network you are using does not allow you to configure the router, configure the machine.

Configuring the router

Filter the packets so that they do not pass over the dial-up router.

Note

❒ The MAC address of the printer doing the filtering is printed on the printer configuration page. For more information about printing a configuration page, see the Printer Unit Type 1045 Printer Reference 2.

❒ For more information about configuring the printer if the router cannot be configured, see the instructions below.

Configuring the printer with NetWare

1 Following the setup method in this manual, configure the file server.

2 Set the frame type for a NetWare environment.

Reference

For more information about selecting a frame type, see the System Settings.

Configuring the printer without NetWare

1 While not printing, the Network Interface Board sends packets on the network. Set the NetWare to inactive.

Reference

For more information about selecting a protocol, see the System Settings.

PostScript Printing from Windows

When printing PostScript from Windows, see the PostScript 3 Unit Type 1045 Operating Instructions Supplement provided as a PDF file on the CD-ROM labeled "Operating Instructions for Printer".

NetWare Printing

Form Feed

You should not configure the form feed on NetWare. The form feed is controlled by the printer driver on Windows. If the NetWare form feed is configured, the printer might not work properly. If you want to change the form feed setting, always configure it on Windows.

- With Windows 95/98/Me, clear the **[Form feed]** check box on the **[Printer Settings]** tab in the printer properties dialog box.
- With Windows 2000, clear the **[Form feed]** check box on the **[NetWare Settings]** tab in the printer properties dialog box.
- With Windows NT 4.0, clear the **[Form feed]** check box on the **[NetWare Settings]** tab in the printer properties dialog box.

Banner Page

You should not configure a banner page on NetWare. If you want to change the banner page setting, always configure it on Windows.

- With Windows 95/98/Me, clear the **[Enable banner]** check box on the **[Printer Settings]** tab in the printer properties dialog box.
- With Windows 2000, clear the **[Enable banner]** check box on the **[NetWare Settings]** tab in the printer properties dialog box.
- With Windows NT 4.0, clear the **[Enable banner]** check box on the **[NetWare Settings]** tab in the printer properties dialog box.

Printing after resetting the machine

After resetting the remote printer, the connection from the print server will be cut off for about 30-40 seconds before re-connecting. Due to the NetWare specification, print jobs may be accepted, but they will not be printed during this interval.

When using the machine as a remote printer, wait about 2 minutes after resetting the printer before attempting to print.

When Using DHCP

Note the following points when using DHCP (Dynamic Host Configuration Protocol).

Supported systems

Windows NT Server 4.0 can be configured as a DHCP server.

Configure the printer with a reserved IP address

To always assign the same IP address, configure a reserved IP address using the DHCP server.

Note

❒ When multiple DHCP servers are used, reserve the same address with each DHCP server. The Network Interface Board needs to receive information from the DHCP server that it contacts.

Follow these steps to configure the printer with a reserved IP address.

1 Start the DHCP manager.

2 Select the scope that will be used, and on the [Scope] menu, click [Reservation].

3 Type the IP address into [IP Address].

4 Type the MAC address of the Network Interface Board into [Unique Identifier].

Note

❒ Do not use hyphens to separate the numbers.

❒ If you do not know the MAC address, it can be found on the configuration page printed by the printer.

5 Type a name and comment into the [Client Name] box and the [Client Comment] box.

Note

❒ For more information about client names, see P.91 *"Additional information"*.

6 Click [Add].

An IP address is reserved.

7 Click [Close] to close the dialog box.

Additional information

- When you click **[Active Lease]** on the **[Scope]** menu of DHCP manager, a list of client leases appears. When the reserved IP address is not active, the name of the reservation is the name entered in the Client Name field of the **[Add Reserved Clients]** dialog box. When the reserved IP address becomes active, the client name changes to the printer name configured by the Network Interface Board. Only the first 13 letters of the printer name appear here. When you use the printer with SmartNetMonitor for Client, use the host name of the printer as the **[Client Properties]** dialog box.
- When the DHCP server does not assign an IP address, the Network Interface Board uses 11.22.33.44 as a temporary IP address. You can check the machine's IP address on the network configuration page.
- Because 11.22.33.44 is a special IP address, you cannot print using this address.
- The DHCP relay agent is not supported. When using the DHCP relay agent via an ISDN line connection, the packets from the printer will be sent through the ISDN connection, which can lead to very high communication charges.

When Using the NIB Setup Tool

If the Network Interface Board cannot browse using the TCP/IP protocol, make sure that the TCP/IP environment is correctly configured in your computer.

When Using IPP with SmartNetMonitor for Admin

When using IPP with SmartNetMonitor for Admin, note the following:

- The network printer can only receive one print job from SmartNetMonitor for Admin at a time. While the network printer is printing a job, another user cannot access the network printer until it completes the job. In this case, SmartNetMonitor for Admin tries to access the network printer until the retry interval expires.
- If SmartNetMonitor for Admin cannot access the network printer and times out, SmartNetMonitor for Admin stops sending the print job. In this case, you should cancel the paused status from the print queue window. SmartNetMonitor for Admin will resume access to the network printer. You can delete the print job from the print queue window, but canceling a print job that has been printed by the network printer might cause the next print job sent from another user to be incorrectly printed.
- If a print job that is sent from SmartNetMonitor for Admin is interrupted and the network printer cancels the job because something went wrong, launch the print job again.
- Print jobs sent from another computer do not appear in the print queue window regardless of the protocol.

- If various users send print jobs using SmartNetMonitor for Admin to network printers, the printing order might not be in the order in which the jobs were sent.
- An IP address cannot be used for the IPP port name because the IP address is used for the SmartNetMonitor for Admin port name.

Specifications

LAN interface	100BASE-TX, 10BASE-T
Frame type	EthernetII, IEEE802.2, IEEE802.3, SNAP
Protocol	• TCP/IP Windows 95 Windows 98 Windows Me Windows 2000 Windows NT 4.0 • IPX/SPX NetWare 3.12, 3.2, 4.1, 4.11, 4.2, 5, 5.1 IntranetWare • NetBEUI Windows 95 Windows 98 Windows Me Windows 2000 Windows NT 4.0 • IPP Windows 95 Windows 98 Windows Me Windows 2000 Windows NT 4.0 • AppleTalk Mac OS 7.6.1 ~9.0.4
SNMP	MIB-II, PrinterMIB, HostResourceMIB, RicohPrivateMIB

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EE UE GB USA B362-8640